The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 23. NO. 38 TULSA, OKLAHOMA, FEBRUARY 12, 1925

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Refiners Increase Demand for Crude

Average daily production in United States week ended Feb. 7, 1,914,428 bbls. Loss from previous week, 13,554 bbls.

Record Runs Result in Tight Market. Crude Production Decline About Confined to One Area

Highest daily average estimated production last year, week ended August 23, 2,057 319 bbls. Lowest January 12, 1,871,143 bbls.

By Andrew M. Rowley

The close interrelationship between the crude and refined oil markets is being demonstrated very clearly at this time due to the extensive operations of the refiners and the resultant tightening of crude oil because of this demand from refiners. New high records in the quantity of crude oil run to stills in refineries of the country are being made monthly and this situation, in connection with the fact crude oil production has been declining in the Mid-Continent area, is largely responsible for the increased prices for crude oil in all areas. If this condition continues, another increase in price for crude in the Mid-Continent area at least seems inevitable for the major crude oil purchasing companies will be forced to raise their prices to hold connections which might be lost through the acceptance of premiums being offered for crude by those desiring the oil for immediate refining purposes.

On last Saturday, two refining companies buying crude from the Tonkawa Field in Oklahoma increased their prices for that oil 10 cents a barrel, making the price $2.10, while price schedule of the major purchasing companies in the Mid-Continent quoted the price for that grade of oil at $2 a barrel. Concerns desiring to buy crude held in storage are finding the owners unwilling to sell at the prevailing posted market price and a premium of more than 50 cents a barrel has been paid for crude in tankage.

This increased demand for crude on the part of refiners, which has been the prime cause of crude price advances, is more or less artificial because the increase in consumption of refined oil products has not kept pace with the increased runs of crude oil to stills. In other words, refined products have been going into storage in large quantities. Such a condition can continue only so long and refiners then will be forced to curtail operations which, automatically, will reduce requirements for crude oil.

If crude oil production would continue to decline as it has since Wortham reached its peak on January 15, the refiners naturally would be justified in running as much oil at this time as they could, but, as was pointed out in these columns last week, the decline in production apparently has been halted. While the output of all fields of the United States showed a decrease of 13,554 barrels daily last week, the drop in East Central Texas, including Wortham, Powell, Mexia, Currie and Richland, totaled 13,915 barrels. In other words, the fields outside of East Central Texas showed a slight gain last week. Wortham showed a decline of 10,000 barrels daily. This field is expected to drop to about 50,000 barrels a day and then maintain that production for some time.

With one area of the United States mainly responsible for the declines in production and that area expected to soon reach a fairly stationary level, the large decreases in production experienced recently cannot longer be expected. There may be another decline in output for all fields of the country next week due again to Wortham which averaged 64,039 barrels for the 24 hours ending Tuesday morning of this week, but the main fact to consider at this time is that the big drop in production already has been experienced and that within the next two weeks it is more probable the output of crude will begin to show increases rather than decreases.

In almost every field in the United States plans are being made for extensive drilling campaigns. Weather conditions have held back the starting of a large part of these operations and muddy roads have proved a big factor in delaying drilling. With improvement in these conditions it is expected a greater amount of drilling will be started than for a long time past. New production is almost certain to be found while no material decline can be expected from the older producing fields where every effort will be made to maintain or increase production so that the benefits of the higher crude prices may be enjoyed.

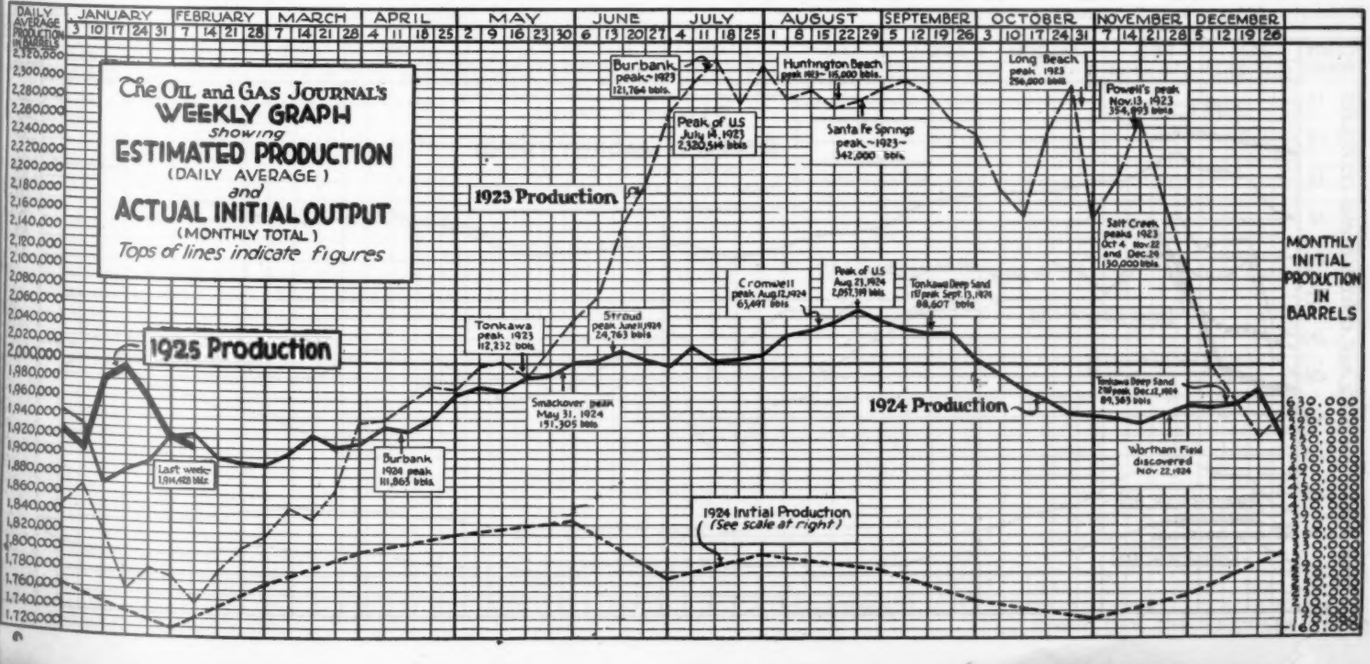
The outstanding feature of the past week in the matter of crude oil prices was the substantial advance given California oils. The increase, ranging from 25 to 58 cents a barrel, was the first general advance in crude prices on the Pacific Coast in just a year. Last September the gravity schedule then in effect was rearranged to provide higher prices for higher grade oil but the previous general price advance was made effective February 5, 1924, the one last week being made on February 4. The increase of last week means about $200,000 a day more to producers for their product and adds about $31,000,000 to the value of crude oil held in storage in California.

PRODUCTION IN THE UNITED STATES

Estimated daily average crude oil production in the United States for the week ended February 7, and a comparison with previous week follows:

	Feb. 7	Jan 31
Oklahoma—Northern Fields:		
Tonkawa	94,890	97,290
Burbank	57,220	58,310
Other Osage Fields	36,100	36,115
Cushing and Shamrock	22,990	23,070
Bristow and Eastern Bristow	36,450	35,315
Cromwell	36,160	37,210
Papoose	36,880	36,140
Northern Miscellaneous	95,215	93,925
Southern Fields	63,220	63,850
Total Oklahoma	479,125	481,225
North Louisiana	49,693	49,785
Arkansas—		
El Dorado and Calion	9,840	9,685
Smackover Light	32,505	32,705
Smackover Heavy	60,310	60,620
Stephens and Nevada	3,235	3,195
Total Arkansas	105,890	106,205
North Central Texas	128,470	127,037
Powell	57,600	58,300
Mexia, Currie, Richland, etc.	37,700	40,915
Wortham	78,300	88,300
Kansas	82,275	82,770
Total Mid-Continent Area	1,019,053	1,034,537
Gulf Coast	71,990	72,460
Southwest Texas	44,205	44,195
Eastern	96,950	97,250
Rocky Mountain Area	88,230	86,540
California—		
Santa Fe Springs	47,000	46,000
Long Beach	118,000	118,500
Huntington Beach	41,000	40,500
Torrance	41,000	42,000
Dominguez	55,000	55,000
Remainder of State	292,000	291,000
Total California	594,000	593,000
Total United States	1,914,428	1,927,982

Decrease, 13,554 Barrels



Further Advance in Gasoline Prices

For Sixth Consecutive Week Motor Fuels Seek Higher Levels in Oklahoma. Fear Expressed That Refinery Output is Too Great

By C. O. Willson

Additional refining and marketing news will be found in the section starting on Page 116

Unaided by important changes either in Mid-Continent crude schedules or tank wagon quotations, prices on all grades of gasolines in Oklahoma (Group 3) continued to advance during the past week. This makes the sixth successive week in which motor fuel prices at the refineries or natural gasoline and blending plants have advanced, the total increase for the period totaling from 4 to 4½ cents a gallon.

Although no crude changes materialized, expect a slight increase in the highest gravity schedule, a majority of sellers expect further advances during February and this attitude is partially responsible for the upward trend in gasoline prices which have totaled from ½ to 1 cent during the past seven days. The domestic demand for gasoline has been all that could be expected for the season of the year and the generally unsettled market situation. Although the export buying, especially in Oklahoma, has not been heavy, the fact that the buyers for foreign consumption have not been driven entirely out of the market by the recent advances in the refinery prices, has also encouraged the sellers and led to belief that higher prices could be maintained.

Kerosene Situation

The other feature market development in Oklahoma has to do with kerosene which advanced slightly during the week. Kerosene prices in Oklahoma and the Mid-Continent generally have shown little change since early in November. Previous to that, there had been a rise from the low levels of the summer brought about by the fall demand. Just now the trade is waiting for the spring demand to materialize. As shown in the graph below, this demand, which usually comes before the spring work opens in the agricultural sections, advanced 41-43 water white kerosene to a low of 6 cents at this time last year. Prices then began to slump to a low of 4 cents early in May. Practically the same situation developed in 1923, although the price advance was not as great. In that year kerosene prices started to advance in January, reaching a high of 5 cents for 41-43 water white, early in February and then started to decline.

The fact that there has been practically no improvement in prices since the first of the year has led some market observers to conclude that the statistical position of kerosene is such that any increase in demand will be taken care of without advancing prices. The Government figures covering Mid-Continent operations show that on January 1, stocks of kerosene totaled 49,871,911 gallons, an increase of approximately 5,000,000 gallons over the December 1 total and approximately 10,000,000 gallons more than the total stocks for November 1. Kerosene stocks in Oklahoma, in fact, have been steadily climbing since early fall. In Oklahoma and Kansas the stocks on October 1 of last year totaled 19,687,227 gallons and this had increased so that on the opening day of this year the total was 32,115,612 gallons or approximately 65 per cent greater.

The statistical position of kerosene for the entire country shows the same general trend. Stocks on January 1 were higher than any time during the past three years, totaling 338,825,779 gallons. It is needless to state that this situation does not point to any large advances in kerosene prices and herein probably lies the explanation of the fact that kerosene has generally been termed "slow" for several weeks.

Some of the trade are expecting the customary spring advance and have already advanced their prices. A large marketing organization is reported to have offered 5 cents for 41-43, water white kerosene for March and April delivery. It is also claimed that this offer made to several refiners was not accepted, the sellers apparently believing they would better themselves if they waited until that time before selling.

Bureau of Mines Report

The situation in regard to kerosene and gasoline and fuel oil, including gas oil, is summarized in the accompanying table covering Mid-Continent refinery operations. This table was derived from the Bureau of Mines report for December, the full details of which showing production, consumption and stocks of all refined products, will be found on page 126 of this issue.

Those of the trade who have attempted to analyze the Government's monthly report with the view of determining the probable statistical position over the first six months of 1925 of certain products in which they are interested are all inclined to fear that the refiners in this section may injure their chances for a profitable year by too great a refinery output during the winter and spring months. The December report shows a very satisfactory consumption of all the main refined products, considering the time of the year. This favorable situation during that month was, however, largely discounted by a record production of gasoline, kerosene, fuel and gas oils so that stocks of all these main products were increased.

As shown in the accompanying table Mid-Continent refiners added 18,440,647 gallons of gasoline to stocks. This represented 40 per cent of the 46,000,000 gallons which was the total increase in gasoline storage for the entire country. This was the second successive month in which stocks have increased in the Mid-Continent Field although it was the first month since May for the entire country. Fuel and gas oil stocks were reduced slightly, although for the entire country stocks are higher than any previous period in the history of the industry, the total being 1,671,000,000 gallons. The stock position in regard to kerosene has already been explained.

Crude Runs Increase

Of more significance is the fact that crude runs to stills in the Mid-Continent area increased from 376,329 bbls. daily in November to 386,639 bbls. in December, an increase of approximately 10,000 bbls. daily. This increase which was indicated in The Oil and Gas Journal's report early in December established a new record for Mid-Continent refinery operations. This peak operating status continues up to the

(Continued on Page 122)

REFINED MARKET BAROMETER

Gasoline prices advanced at the refineries in all areas during the past week. The greatest increase was in California where the refiners absorbed the full 2-cent advance in West Coast gasoline tank wagon quotations. Scattered gasoline tank wagon advances in other areas also aided the refinery market. Fuel oil prices advanced in California with the higher crude schedules and the market is strong in the East Coast areas. At interior points the fuel and gas oil market is generally sluggish and minor reduction in prices developed at a few points. Kerosene prices are higher where any changes occurred with no change in the demand. Natural gasolines strong in all areas and prices are generally higher. Prices on all grades of lubricating oils are being adjusted in line with higher crude quotations. Strong demand for wax.

Mid-Continent—Gasoline prices including natural gasolines and blends from ½ to 1 cent higher in all refining areas. Fuel oil strong in North Texas and slow in other sections. No important changes in fuel and gas oil prices. Upward trend in kerosenes. Distillates slow. Lubricating oils higher.

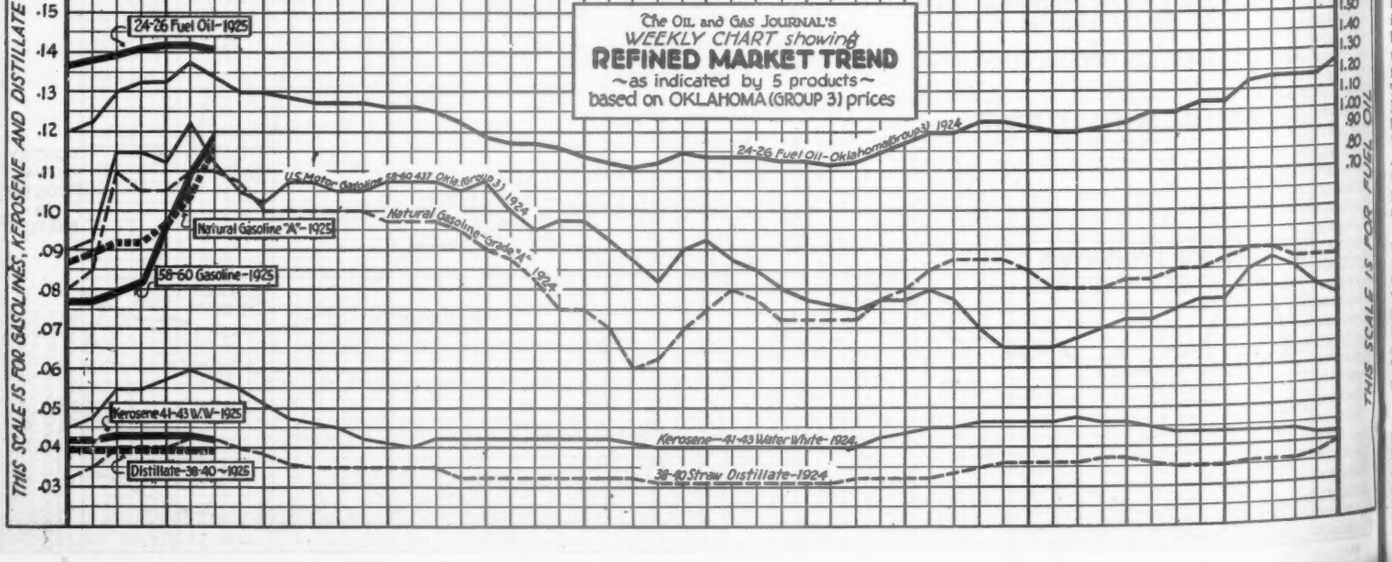
Atlantic Seaboard—Gasoline prices higher. Kerosene firm. Fuel oil strong. No change in lubricants. Wax strong and prices higher. Export movement slow except lubricants.

California—Advances in crude and tank wagon prices reflected in higher gasoline and fuel oil prices. Advance in gasolines including natural gasolines 2 cents and fuel oil 25 cents. Other products expected to stiffen in price although no important changes have yet materialized.

Pennsylvania—Gasoline prices advance rapidly. No change in kerosene. Neutral prices higher with fair demand. Strong demand for cylinder stocks and prices higher. Fuel oil weak. Wax very strong.

Gulf Coast—Neutrals advanced from 1 to 1½ cents due to higher crude prices. Fuel and gas oils strong.

Chicago—Favorable weather aids gasoline market. Fuel and gas oil slow. Distillates sluggish. Lubricants firm.



New Peak in Refinery Operations

Mid-Continent Plants Running 388,310 Barrels of Crude to Stills Daily. Several Refineries Start Up During January

By C. D. Lockwood

For the third time in the past four months, Mid-Continent refiners have broken all previous records in the amount of crude oil run to their stills. On February 1, with six more plants in operation than were running at the beginning of January, refinery runs totaled 388,310 bbls., a gain of 15,775 bbls. over the January figures and an increase of 5,100 bbls. over the previous high mark established on December 1, 1924. Only about half of this gain can be accounted for by the resumption of operations in plants previously shut down, as the nine new refineries in the operating column contributed only 11,425 bbls. to the total runs, and the three which were shut down during the month subtracted 1,500 bbls., leaving a net gain of 9,925 bbls. attributable to new plants. A more or less general tendency displayed by refiners throughout the Mid-Continent to slightly increase their runs was largely responsible for the record total for the entire area.

Oklahoma and Kansas operators, however, contributed the major portion of the gain, the former State having shown an increase of 11,960 bbls. and the latter 3,655 bbls., while North Central Texas gained only 725 bbls. and Arkansas and North Louisiana both showed a slight decrease. A part of this may be due to the fact that five of the plants started up during the month are located in Oklahoma and one is in Kansas, while one is in Arkansas and two are in Texas.

Weather Helped Increase

Improved weather conditions the first of this month allowed plants that had decreased their runs in January to resume operations on the same scale they employed in December, and the general improved condition of the market is also reflected in the figures. Wortham's spectacular decline permitted a series of crude price advances ranging from 40 cents to 70 cents during January, while spot gasoline advanced 3 cents and fuel oils 10 cents. Kerosene, gas oil, distillates and other refined products held firm.

The total refinery runs for February 1 include 5,000 bbls. at the Waite Phillips Co.'s Okmulgee, Okla., plant which was to be shut down on the tenth of February for 10 days in order to make repairs and adjustments.

The same company started running oil through its new plant at Wichita, Kans., on February 5, and it was the company's intention to run 2,500 bbls. at first, later in the month increasing this to 4,000 bbls. This refinery was purchased by the Waite Phillips Co. some time ago from the Sterling Oil & Refining Co. The crude is obtained from the Rainbow Bend Field, which was producing 10,135 bbls. on February 2, and in which the Waite Phillips Co. owns a half interest. A 51-mile 6-inch pipe line, built from the field to the Wichita refinery by the company, was put in operation a short time ago.

The next largest of the plants which resumed operations since the January report was compiled was the Bell Oil & Gas Co.'s refinery at Grandfield, Okla. This plant was mentioned last month as having started up at its capacity of 3,000 bbls. shortly after January 1, the crude supply being obtained from the North Texas fields. On February 1, it was running 2,500 bbls.

Plants Resume Operations

The Mutual Oil Co.'s refinery at Sapulpa, Okla., (formerly the Sapulpa Refining Co.), was carried as shut down on January 1, but resumed operations January 16 and ran 1,000 bbls. until February 1, when this amount was doubled. The Newkirk Refining Co., at Newkirk, Okla., started up the old Pirtle-Pittman plant, which has been shut down for more than two years, and was running 1,000 bbls., the crude being obtained from the Tonkawa Field and from the Winfield, Kans., area. The Lawton Refining Co., which shut down its plant at Lawton, Okla., last month, started up again the first of February and was running 75 bbls. The Gilmer Oil Co.'s skimming plant at Ringling, Okla., which has been shut down for several months, also resumed operations at the rate of 800 bbls. of crude daily.

It was announced that the 1,000-bbl. plant of the Glen Braden Refining Co., located at Perry, Okla., would start up during the month. This plant was built about two years ago and has been shut down for over a year. Recently Dr. C. K. Francis, formerly vice president, in charge of refinery operations for the Producers & Refiners Corp., took over the management of the plant and it will be operated under his supervision. This refinery has a process for making natural gas from crude oil, but will not be operated as the present owners will only skim the crude. The initial crude runs to stills will be from 400 to 500 bbls. daily. The operations of this plant are not included in the accompanying table, because it was not operating February 1.

North Central Texas

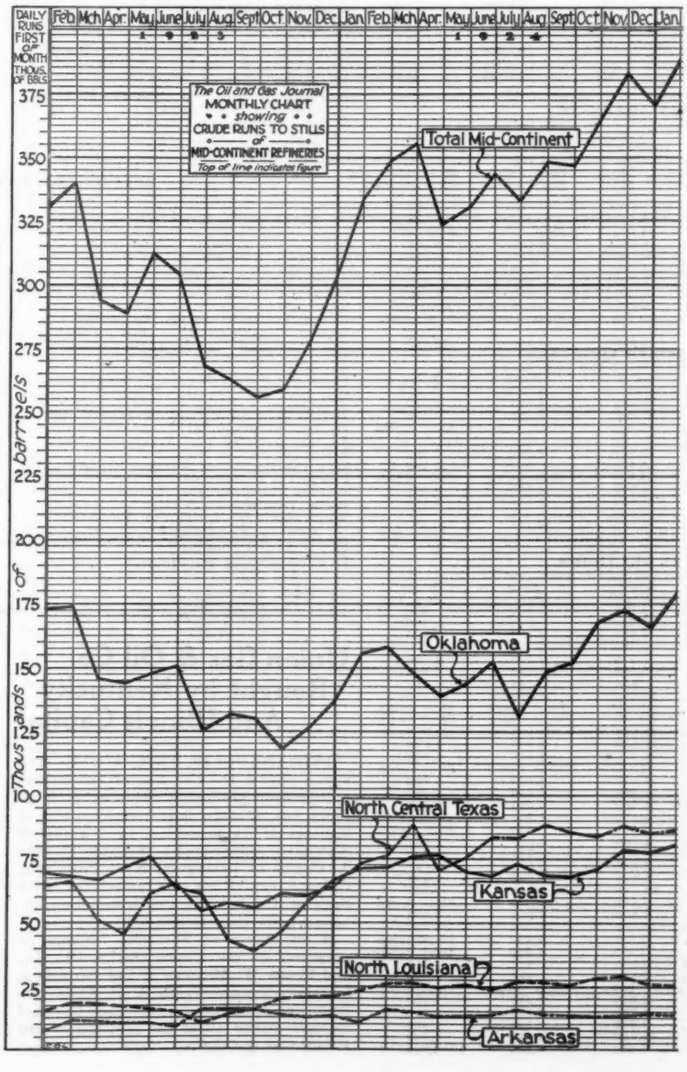
In the North Central Texas district, only one refinery was added to the list of operating plants. That was the Falls Refining Co.'s plant at Wichita Falls, Tex., formerly owned by the Bankers Producing & Refining Co. It was built in 1920 with a skimming capacity of 1,500 bbls. and started running about half that amount. The Four States Refining Co., of Texarkana, Tex., was changed to the Texas list as it is located on the Texas side of the State line. After a shutdown lasting three months, this plant resumed operations, running 500 bbls.

In Arkansas, the only new plant starting up this month is that of the Houston Oil Co., of Camden, which was handling 850 bbls. on February 1. This plant, which has been in the process of construction for over a year, has the Dubbs cracking units.

Only a few important changes in the crude runs of plants that had been operating in January were made this month. Among those showing increases are the Cameron Refining Co., at Ardmore, Okla., which increased its runs from 2,800 to 3,500 bbls.; the Cosden Oil & Gas Co., West Tulsa, from 28,000 to 30,000 bbls.; the Transcontinental Oil Co., at Fort Worth, Tex., from 2,500 to 3,500 bbls., and the Skelly Oil Co. at El Dorado, Kans., from 6,500 to 8,000 bbls. Those plants which show marked declines in their runs include the Peerless Oil Refining Co., at Chanute, Kans., from 2,500 to 1,500 bbls.; the Panhandle Refining Co., of Wichita Falls, Tex., from 4,100 to 2,700 bbls. and the Illinois Oil Co. at Cushing, Okla., from 3,000 to 2,000 bbls.

Only three plants were shut down during the month and they were of minor importance. One of these was in Oklahoma and the other two in Kansas. They were: the Yale Asphalt Co., at Yale, Okla., which had been running 300 bbls.; the Grant Oil Co. of Augusta, Kans., which ran 200 bbls. on January 1, and the Miller Petroleum Co. at Humboldt, Kans., which handled 1,000 bbls. on January 1. The latter is a temporary shutdown.

The names of three plants listed in the accompanying tables have been changed since the January table was published. The Sapulpa Refining Co., Sapulpa, Okla., is now listed as the Mutual Oil Co., the Frontier Refining Co., Hutchinson, Kans., has been changed to the United Oil & Refining Co., and the H. H. Cross Refining Co., of Corsicana, Tex., to Kent-Middleton Refining Co.



New Peak for Oklahoma

The total Mid-Continent area was not the only one to establish a record in crude runs on February 1. The previous peak in Oklahoma alone was 173,000 bbls., which was made December 1, and the new peak on February 1 was 179,075, a difference of 6,075 bbls. The State of Kansas also made a record with 81,655 bbls., its former peak on December 1 having been only 78,925 bbls., a difference of 2,730 bbls.

Compared with the figures for crude runs a year ago, the Mid-Continent has gained 53,985 bbls., and of this amount Oklahoma's share was 23,825 bbls., or nearly half. Texas came next with 14,275 bbls.; Kansas third with 9,855 bbls.; Arkansas 3,480 bbls., and North Louisiana gained 2,550 bbls. over the figures for February 1, 1924. There were 127 plants operating at that time, compared with 129 plants in operation February 1 of this year.

As anticipated in these columns last month, the percentage of Mid-Continent crude run to stills of Mid-Continent refineries increased materially the first of February as compared with January 1, although the estimated crude production jumped 22,857 bbls. during the month. For the first week in February, Mid-Continent estimated production amounted to 1,034,537 bbls. daily, and the refinery runs of 388,310 bbls. daily, constituted 37.5 per cent of that. The percentage on January 1 was 36.9 per cent and on December 1, 36.8 per cent. This February 1 percentage has been exceeded only four times during the past three years. In February and March of 1923, crude runs amounted to 37.7 per cent and 39.5 per cent of Mid-Continent production, respectively, and in February, March and April of last year the percentages were 37.5, 37.8 and 37.7 respectively. Thus it is seen that the percentage for February of this year is almost identical with that for the same period of 1923 and 1924. At this time last year, Mid-Continent production was holding almost without variation around 895,000 bbls. daily, of which amount the Powell Field was contributing 100,000

bbls. Indications are that present Mid-Continent production will hold fairly steady around 1,030,000 bbls. of which the Wortham Field is making only about 80,000 bbls. and seems unlikely to increase that amount very much.

Relation to Crude Prices

The percentage of crude produced in the Mid-Continent fields, which is refined by refiners located in that area is mentioned because past experience has shown that it bears a very close relationship to crude price trends as posted by the major purchasing companies. Developments in the past have shown that when refiners begin taking 36 per cent or more of the crude produced in the Mid-Continent Field it bring about a tight market situation with resulting advances in posted prices. There has been a gradual increase in this percentage ever since early fall of last year, when general market conditions first began to improve.

With low crude prices, Mid-Continent refiners despite the unfavorable gasoline market were generally able to operate profitably the latter part of last year and as a result the trend has been to increase crude runs to stills. These increased operations gradually removed all the surplus crude available in the Mid-Continent fields and brought about the tight situation which presaged advances in the posted prices. Every indication pointed to crude advances early in December but as previously explained due to the bringing in of the new Wortham Pool, the expected action was postponed. The crude advances were announced in January just as soon as it was apparent that the new pool had reached its peak. The fact that at the present time the percentage of crude refined in the Mid-Continent is 37.5 indicates the scramble for crude supplies among the large and small buyers and in the opinion of many leading market students points to further advances in posted crude prices.

MID-CONTINENT REFINING OPERATIONS

Table No. 1

(Based on plants which have been in operation during the past year.)

	No. Plants Feb. 1,'25	Capacities Feb. 1,'25	Plants Op. Feb. 1,'25	Dy. Runs Feb. 1,'25
Oklahoma	60	269,200	52	179,075
North Central Texas	47	171,700	41	87,000
*Kansas	27	122,500	21	81,655
North Louisiana	8	39,300	6	26,100
Arkansas	14	36,200	9	14,480
Total	156	638,900	129	388,310

*Includes three Missouri plants.

Table No. 2

Based on operations of all plants as of February 1, 1925 and January 1, 1925. Capacities includes all plants regardless of how long they have been shut down.)

	No. Plants Feb. 1,'25	Capacities Feb. 1,'25	Plants Op. Feb.1,'25	Dy. Runs Plants Op. Feb. 1,'25	Jan. 1,'25	Dy. Runs Jan. 1,'25	Dy. Inc. Feb. 1,'25
Oklahoma	103	359,600	52	179,075	48	167,115	11,960
North Cent. Texas	74	243,100	41	87,000	39	86,275	725
†Kansas	39	149,600	21	81,655	22	78,000	3,655
North Louisiana	17	48,580	6	26,100	6	26,600	*500
Arkansas	15	44,200	9	14,480	8	14,545	*65
Total	248	845,080	129	388,310	123	372,535	15,775

†Includes four Missouri plants. *Decrease.

Table No. 3

(Based on operations of all plants as of February 1, 1925 and February 1, 1924)

	No. Plants Feb. 1, '24	Capacities Feb. 1, '24	Plants Op. Feb. 1. '24	Dy. Runs Feb. 1, '24	Dy. Inc. Feb. 1, '25
Oklahoma	108	371,400	53	155,250	23,825
North Central Texas	72	223,850	38	72,725	14,275
*Kansas	43	136,100	24	71,800	9,855
North Louisiana	19	51,950	6	23,550	2,550
Arkansas	17	37,950	6	11,000	3,480
Total	259	821,250	127	334,325	53,985

*Includes four Missouri plants.

REFINING OPERATIONS IN ARKANSAS

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Feb. 1	Runs Jan. 1
Cross Refining Co., Smackover	2,000	1,000	1,700
Farmers Oil & Refining Co., Texarkana	750	Shut down	Shut down
Grison Refining Co., Eldorado	750	Shut down	Shut down
Home Refining Co., Camden	500	200	220
Home Oil & Refining Co., Hot Springs	500	80	75
Houston Oil Co., Camden	5,000	850	Building
Jones & Co., R. C., El Dorado	1,000	Shut down	Shut down
Kettle Creek Refining Co., Pearson	4,000	2,500	2,500
Lion Oil & Refining Co., El Dorado	10,000	6,500	6,000
Ouachita Valley Refining Co., El Dorado	2,000	850	1,500
Pine Bluff Refining Co., Pine Bluff	2,000	600	800
Root Refineries, El Dorado	3,000	1,900	1,750
Union Pipe Line & Refining Co., El Dorado	4,000	Rerun	Rerun
Shippers Petroleum Co., El Dorado	700	Shut down	Shut down
Total	36,200	14,480	14,545

REFINING OPERATIONS IN NORTH LOUISIANA

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Feb. 1	Runs Jan. 1
Caddo Central Oil & Refining Co., Shreveport	3,500	3,500	3,500
Caddo Central Oil & Refining Co., Shreveport	7,000	4,000	3,500
Great Southern Refining Co., Ardis	2,000	Shut down	Shut down
Louisiana Oil Refining Corp.—			
Shreveport	10,000	8,000	9,000
Bossier	3,000	600	600
Red River Refining Co., Crichton	1,800	Shut down	Shut down
Shreveport Producing & Refining Co., Shreveport	5,000	4,000	4,000
*The Texas Co., Ardis	7,000	6,000	6,000
Total	39,300	26,100	26,600

*Topping.

REFINING OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Feb. 1	Runs Jan. 1
Allied Refining Co., Okmulgee	1,800	1,000	850
Anderson-Prichard, Cyril	1,200	900	900
Barnsdall Refining Co., Barnsdall	5,000	4,500	4,500
Bell Oil & Gas Co., Grandfield	3,000	2,500	Shut down
Bolene Refining Co., Enid	5,000	4,000	4,000
Cameron Refining Co., Ardmore	3,000	3,500	2,800
Canfield Refining Co., Yale	500	75	115
Champlin Refining Co., Enid	16,000	12,000	11,300
Chestnut & Smith Corp., Sand Springs	5,000	Shut down	Shut down
Coleman-Nelson Corp., West Tulsa	2,000	Shut down	Shut down
Cosden & Co., West Tulsa	35,000	30,000	28,000
Cushing Refining & Gasoline Co., Cushing	2,500	2,000	1,500
Cushing Refining & Gasoline Co., Blackwell	1,500	1,000	1,000
Daisy Belle Petroleum Co., Wilson	2,000	Shut down	Shut down
Empire Refineries, Inc., Cushing	7,000	5,000	5,000
Empire Refineries, Inc., Okmulgee	3,000	3,000	3,000
Empire Refineries, Inc., Ponca City	6,500	6,000	6,000
Garber Refining Co., (Omar)	3,000	1,300	1,300
Gilmer Oil Co., Ringling	1,000	800	Shut down
Globe Oil & Refining Co., Blackwell	5,000	4,500	4,500
Hewitt Refining Co., Hewitt	1,800	775	700
Illinois Oil Co., Cushing	3,000	2,000	3,000
Imperial Refining Co., Ardmore	6,000	4,500	4,400
Johnson Oil Refining Co., Cleveland	4,000	3,000	3,300
Lawton Refining Co., Lawton	1,000	75	Shut down
Lorraine Refining Co., Bristow	4,000	2,000	2,000
Mariand Refining Co., Ponca City	15,000	12,000	12,000
Mutual Oil Co., Sapulpa	7,000	2,000	Shut down
Newkirk Oil & Refining Co., Newkirk	2,000	1,000	Shut down
Nyanza Refining Co., Wilson	2,500	800	700
Oil State Refining Co., Enid	3,000	450	350
Oil State Refining Co., Allen	600	Shut down	Shut down
Okla.-Tex. Refining Co. (Sagamore), Grandfield	2,000	1,900	2,000
Phillips Co., (Waite), Okmulgee	6,000	5,000	5,000
Peppers Gasoline Co., Covington	1,000	500	400
Pierce Oil Corp., Sand Springs	10,000	5,500	5,000
Producers & Refiners Corp., West Tulsa	7,000	4,500	4,000
Producers & Refiners Corp., Blackwell	8,000	1,500	1,500
Pure Oil Co., Ardmore	6,500	2,000	2,000
Pure Oil Co., Cushing	5,000	4,000	4,000
Pure Oil Co., Muskogee (O. P. & R. Co.)	2,500	2,000	2,000
Riley Petroleum Co., Bristow	800	400	400
Rock Island Refining & Pipe Line Co., Duncan	2,500	1,800	400
Roland Oil Co., Bristow	1,500	1,200	1,500
Shaffer Oil & Refining Co., Cushing	8,000	6,500	1,100
Superior Oil Corp., Grandfield	3,000	Shut down	6,500
Sun Co., Yale	3,000	2,000	Shut down
Sinclair Refining Co., Cushing	6,000	3,500	2,000
Sinclair Refining Co., Muskogee	1,000	700	3,000
The Texas Co., West Tulsa	10,000	9,500	500
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,200	9,500
Tidal Refining Co., Drumright	5,000	4,000	1,100
Transcontinental Oil Co., Boynton	2,500	2,000	4,500
Transcontinental Oil Co., Bristow	6,000	5,500	1,500
Tonkawa Petroleum Co., Tonkawa	2,500	1,000	5,000
Turley Refining Co. (formerly Home Petroleum Co.) Oklahoma City	2,500	Shut down	800
Whaleback Production Co., Oklahoma City	1,500	Shut down	Shut down
Western Oil Corp., Beckett	1,500	1,200	Shut down
Yale Oil Corp., Yale	1,500	1,000	1,200
Yale Asphalt Co., Yale	1,000	Shut down	1,000
Total	269,200	179,075	300

REFINING OPERATIONS IN NORTH CENTRAL TEXAS

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Feb. 1	Runs Jan. 1
Amarillo Refining Co., Amarillo	3,000	1,000	1,500
American Refining Co., Wichita Falls	7,000	5,100	4,800
Boner, H. E., Burkburnett	500	Shut down	Shut down
Boardman Oil Co., Wichita Falls	750	175	175
Buffalo Refining Co., Sherman	500	250	200
Clayton Oil & Refining Co., Dallas	4,500	4,400	4,300
Crystal Petroleum Co., Burkburnett	1,000	550	550
De Leon Refining & Pipe Line Co., De Leon	1,500	250	250
Falls Refining Co., Wichita Falls	1,500	700	Shut down
Four States Refining Co., Texarkana	750	500	Shut down
Griswold Oil Co., Electra	3,000	2,100	2,450
Gulf Refining Co., Fort Worth	15,000	6,000	5,200
Humble Oil & Refining Co., Burkburnett	2,000	1,800	1,900
Humble Oil & Refining Co., Hearne	10,000	7,600	7,600
Interstate Gasoline Products Co., Iowa Park	2,000	Shut down	Shut down
Iowa Park Producing & Refining Co., Iowa Park	2,500	Shut down	Shut down
Kent-Middleton Refining Co., Corsicana	2,500	950	950
Lone Star Refining Co., Wichita Falls	4,000	Shut down	Shut down
Miller Petroleum Co., Wichita Falls	3,000	2,500	2,000
Magnolia Petroleum Co., Fort Worth	12,000	6,500	6,600
Magnolia Petroleum Co., Corsicana	10,000	2,100	2,100
Megargel Refining Co., Megargel	2,000	1,000	1,100
Mexia Oil & Refining Co., Mexia	600	100	100
National Refining Co., of Texas, Greenville	2,000	250	300
Noble Oil & Gas Co., Burkburnett	5,000	2,000	2,000
Olney Oil & Refining Co., Olney	1,000	450	450
Oriental Refining Co., Dallas	6,000	300	300
*Oriental Refining Co., (Trinity), Dallas	5,000	3,100	3,000
Orient Petroleum Co., Wichita Falls	2,000	1,400	1,200
Paris Refining Co., Paris	200	75	200
Panhandle Refining Co., Wichita Falls	4,000	2,700	4,100
Prairie Refining Co., Grand Prairie	500	Shut down	Shut own
The Petroleum Corp., Electra	2,000	1,000	1,200
Primrose Refining Co., Wichita Falls	1,500	1,200	1,250
Producers Refining Co., Gainesville	5,000	4,000	4,000
Star Refining & Producing Co., Fort Worth	1,500	700	1,000
State Refining Co., Dallas	1,000	Shut down	Shut down
Sunshine Consolidated Oil Co., Wichita Falls	2,500	950	1,200
Tidal Western Refining Co., Burkburnett	3,000	1,200	1,500
The Texas Co., Dallas	15,000	8,400	8,700
Texhoma Oil & Refining Co., Wichita Falls	7,000	5,000	4,800
Tiger Refining Co., Breckenridge	1,500	100	100
Transcontinental Oil Co., Fort Worth	5,000	3,500	2,600
Travis Refining Co., Burkburnett	1,000	300	300
Waggoner Refining Co., Electra	3,400	2,800	2,800
White Eagle Oil & Refining Co., Fort Worth	5,000	2,800	2,600
Wichita Refining Co., Wichita Falls	2,000	1,200	1,200
Total	171,700	87,000	86,275

*Operated by Magnolia Petroleum Co.

REFINING OPERATIONS IN KANSAS

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Feb. 1	Runs Jan. 1
Commonwealth Oil & Refining Co., Moran	1,800	150	150
Derby Oil & Refining Co., Wichita	5,000	3,800	3,800
El Dorado Refining Co., El Dorado	3,500	2,500	2,500
Grant Oil Co., Augusta	500	Shut down	300
Golden Rule Refining Co., Wichita	1,000	830	1,000
Industrial Refining Co., El Dorado	1,500	Shut down	Shut down
Kanotex Refining Co., Arkansas City	6,000	5,800	5,800
Kansas Oil Refining Co., Coffeyville	2,000	300	300
Kansas City Refining Co., Kansas City	4,000	4,100	3,600
Moore Refining Co., Arkansas City	6,000	3,900	4,200
Miller Petroleum Co., Humboldt	2,000	Shut down	1,000
National Refining Co., Coffeyville	6,000	6,000	6,000
Peerless Oil Refining Co., Chanute	3,000	1,500	2,500
Red Bird Refining Co., Fredonia	200	75	50
Richardson Refining Co., El Dorado	1,500	Shut down	Shut down
Roxana Petroleum Corp., Arkansas City	15,000	10,000	10,000
Sinclair Refining Co., Coffeyville	6,500	5,000	5,200
Sinclair Refining Co., Argentine	8,000	5,500	5,500
Skelly Oil Co., El Dorado	14,000	8,000	6,500
Standard Oil Co. of Kansas, Neodesha	12,000	12,000	11,500
United Oil & Refining Co., Hutchinson	2,500	400	200
Vickers Petroleum Co., Potwin	3,500	2,400	2000
Waite Phillips Co., Wichita	5,000	3,000	Shut down
White Eagle Oil & Refining Co., Augusta	6,500	5,400	5,000
Southern Missouri Group—			
Interstate Refineries, Inc., Centropolis	1,500	Rerun	Shut down
Marshall & Co., Sheffield	2,500	Shut down	Shut down
Wilhoit Refining Co., Joplin	1,500	1,000	1,000
Total	122,500	81,655	78,000

Union Gas & Oil Co. Bought by Kentucky And Illinois Capital

INDIANAPOLIS, IND., Feb. 7.—The Union Gas & Oil Co., one of the largest independent producing concerns in Kentucky has closed a deal here by which it disposes of its properties to a group of capitalists represented by Senator Thomas A. Combs of Lexington, Ky. Prominent Chicago capitalists are associated with Senator Combs and the transaction involved more than $6,000,000.

A. B. Ayres of Fortville, Indiana, is president of the Union Gas & Oil Co., and Frank W. Millikan of Indianapolis is secretary-treasurer with A. C. Albin vice president of the company. They are said to have owned all of the property of the Union Gas & Oil Co.

The consideration is withheld. Senator Combs said that he did not care to make public the names of his associates. The exact purchase price also was not stated.

The company drilled the first well in the Big Sandy Valley seven years ago. Since then it has drilled 578 wells. The company has approximately 500 producing oil wells and 70 gas wells. It has nearly 17,000 acres of land under lease in Lawrence and Johnson Counties, Kentucky. The company is said to have had one of the largest and finest properties in the Ohio Valley. Walter Ball of Mpncie, a former State Senator, represented the company in the transaction. E. Y. Freeman of Chicago and E. L. McDonald of Lexington, Ky., were attorneys for Senator Combs and his associates. Senator Combs is a well known Kentucky capitalist and is chairman of the Kentucky Racing Association.

Oil Board Issues New Questionnaire

Chairman Work Seeks Tentative Ideas Not Necessarily Something Industry Will Demonstrate or Defend

WASHINGTON, D. C., Feb. 7.—Having invited the oil industry to supply the Government with data and constructive suggestions relative to the reputed waste in the production of oil in this country, and, also, such information as might be available concerning foreign exploration and development, the President's Oil Conservation Board, in another letter of inquiry to the industry, has asked for all available data pertaining to "Efficiency in Production.

In making public the board's letter, and the list of names of prominent men identified with the oil industry to whom it was addressed, Secretary of the Interior Work, as chairman of the board, which consists of Secretary Weeks, Secretary Wilbur, Secretary Hoover, and himself, explained in connection with the previous letters sent out, that the cooperation on the part of the industry had been prompt and sympathetic.

"The representative oil men of the country recognize that the board is not engaged in an investigation, but merely a cooperative inquiry. The board wishes to hear all angles, to know all conditions, to have the benefit of the best judgment of the constructive minds of the industry. The Government, as a large producer of oil, hopes to benefit by this inquiry, for, like the industry itself, its methods are not beyond improvement. If, therefore, the Government and the industry jointly can determine upon a program that will eliminate waste, stabilize productive and distributive methods, the industrial and business world will logically enjoy greater and more permanent prosperity."

Every letter of inquiry sent by the board to the industry has been made public, together with a list of the names of those oil company officials to whom addressed, with the view that the public generally might know accurately and precisely just what was being done and why. Also, the board intends that all conferences with industry representatives shall be open to the public in accordance with the policy enunciated by the President.

Text of Letter

The letter of inquiry, just addressed to the industry is, in full, as follows:

"In undertaking its study, the Federal Oil Conservation Board realized the many-sided character of the problem before it. Not only the broad economic and legal phases of the question must be considered, but the engineering side of the oil industry demands attention if the subject is to be adequately covered.

"There are technical problems connected with the discovery of the oil, with the recovery of the oil from the deep sands, with the transportation and refining of the crude oil, and finally with the efficient utilization of all of the products. In order to assemble the ideas of men who have been studying one or several of these problems, you with others are being asked for your opinions on certain phases of the situation, and we will be glad to hear from anyone on the subject.

(1). "With this brief expression of the board's purpose before you, we would appreciate your views on some of the fundamental phases of oil recovery.

(a). "Is the industry utilizing to the best advantage in the recovery of the oil and gas dissolved in or mixed with crude oil under pressure within the interstices of an oil sand? It is generally recognized that this gas pressure is the motive force that moves oil through a sand to a well and in many instances of flush production causes the wells to flow. Facts available indicate that the quantity of gas used in flowing a barrel of oil is often equal to the amount originally dissolved in 10 or more barrels of oil before drilling took place.

(b). "How is the dead oil, depleted of its gas and lying dormant in the sand and dependent on drainage by gravity into a well, ever to reach the gauge tank?

Gas as Oil Producer

(2). "An oil field with gas under high pressure in the higher parts of producing sands may have oil below the gas and water below the oil.

(a). "Can the free gas be utilized to replace the gas produced with the oil thereby rejuvenating, as it were, the dead oil left behind in the otherwise depleted parts of the producing sands?

(3) "In the actual operation of flowing oil wells the gas is frequently considered as a byproduct incident to production of oil and after it is squeezed of its gasoline content but little heed given to its efficiency as a producing agency.

(a) "How can this gas as a practical measure be made an oil producing force?

(b) "Can you suggest general methods, or those applicable to specific conditions with which you are familiar, whereby a given quantity of gas could be made to produce more oil?

(c) "What additional percentage of oil in any pool or field with which you are familiar to do you estimate might be recovered by employment of the gas primarily for this purpose?

(d) "Would the value of the gas possibly lost by use by this method and the cost of its application be probably greater than the oil thereby gained?

(e) "Can gas be profitably transported from one oil field to another in this country for the purpose of bringing oil to wells, and if so, where and under what circumstances?

Flooding and Pressure

(4) "Under the heading of artificial stimulation or rejuvenation of production would come the flooding of otherwise depleted oil sands with water, the forcing of air or gas into the sands under pressure, the application of heat to oil in the sands, the use of a vacuum at the casinghead, and the mining of the oil sands. Perhaps some of these processes may never have wide application in this country, yet some are extensively used even now.

(a). "Will you give us the benefit of your ideas on these or any other methods of securing additional yield from otherwise unproductive oil sands and of increasing the recovery of oil from the sands?

(b) "What is your estimate of recovery under methods commonly used?

(c) "With the new or improved methods of recovery, making for conservation, what means do you consider equitable and practicable for applying the economy to all of the Nation's oil resources rather than only such part as may be owned by the company controlling the patent?

(5). "Under the heading of substitutes for well oil is the promising possibility of the low temperature distillation of oil from carbonaceous materials such as oil shale, lignite, peat, and various coals. If any considerable part of the 2,000,000 bbls. of oil which represents approximately our present daily output is to be replaced by substitutes, we are immediately confronted with large mining and retorting installations representing a vast outlay of capital. These are economic phases, but their general aspect must be kept in mind by the technical man in order that his suggestion may contribute to the major problem.

(a) "Can you give any information or offer any suggestions on this subject of substitutes?

"Please be assured that the ideas or suggestions made to the board in response to this letter will be considered as tentative and not as something you will be expected to demonstrate or defend. What is sought is some general consensus of the best technical opinion, with specific suggestions as to ways and mean from those qualified to advise this board, and therefore we urge your full cooperation."

Among those to whom the letter was sent were:

Ambrose, A. W., Empire Companies, Bartlesville, Okla.

Arnold, Ralph, 639 S. Sprint St., Los Angeles, Cal.

Ball, Max W., president, Ute Petroleum Co. & Western Pipe Line Co., 1104 First National Bank Building, Denver, Colo.

Beal, Carl H., petroleum geologist and engineer, 10th Floor, 200 Bush St., San Francisco, Cal.

Beecher, C. E., Empire Gas & Fuel Co., Bartlesville, Okla.

Bush, R. D., California State Mining Bureau, Ferry Building, San Francisco, Cal.

Buttram, Frank, 601 West Fourteenth St., Oklahoma City, Okla.

Catlin, R. M., Mining Engineer, New Jersey Zinc Co., Franklin, N. J.

Clapp, F. G., Suite 2025, 30 Church St., New York City.

Clarke, H. C. O., Humphreys-Boyd Oil Co., Dallas, Texas.

Cooper, H. C., Hope Natural Gas Co., Pittsburgh, Pa.

DeWolf, F. W., Humphreys-Bold Oil Co., Dallas, Texas.

Dieriex, A. C., president, Honolulu Consolidated Oil Co., 120 Market Street, San Francisco, Cal.

Dumble, E. T., 316 Southern Pacific Building, Houston, Tex.

Emmons, W. H., University of Minnesota, Minneapolis, Minn.

Estabrook, Edward L., geologist, Midwest Refining Co., Casper, Wyo.

Fisher, C. A., 711 First National Bank Building, Denver, Colo.

Franchot, N. V. V., Olean, N. Y.

Gale, H. S., 1775 Hill Drive, Eagle Rock, Los Angeles, Cal.

Gardiner, James H., president, Gardner Petroleum Co., 121 East Sixth Street, Tulsa, Okla.

Gaylord, E. G., geologist, Pacific Oil Co., 79 New Montgomery Street, San Francisco, Cal.

George, H. C., University of Oklahoma, Norman, Okla.

Gester, G. C., 617 Standard Oil Building, San Francisco, Cal.

Gregory, T. B., president, Manufacturers Light & Heat Co., 248 Fourth Avenue, Pittsburgh, Pa.

Hamilton, Walter R., petroleum and mining engineer, 1325 South Boston Avenue, Tulsa, Okla.

Hares, Charles J., 305 Franklin Street, Denver, Colo.

Heald, Prof. K. C., Yale University, New Haven, Conn.

Hopkins, F. B., room 953, 25 Broadway, New York City.

Howard, Frank, Standard Exploration Co., 26 Broadway, New York City.

Hurley, P. J. president Gilliland Oil Co., Tulsa, Okla.

Johnson, Roswell H., professor of oil and gas production, University of Pittsburgh, Pittsburgh, Pa.

Kirwin, M. J., Indian Territory Illuminating Oil Co., Bartlesville, Okla.

Leovy, F. A., first vice president, Gulf Refining Co. of Louisiana, Frick Building Annex, Pittsburgh, Pa.

Lewis, James O., petroleum engineer, Smith, Dunn & Lewis, Kennedy Building, Tulsa, Okla.

Lombardi, Maurice E., Pacific Oil Co., 79 New Montgomery Street, San Francisco, Cal.

Lupton, C. T., 617 Gilpin Street, Denver, Colo.

McCoy, A. W., geologist, Marland Oil Co. of Colorado, Denver, Colo.

Mills, R. Van A., Bureau of Internal Revenue, Fourteenth and B Streets, Washington, D. C.

Milleus, L. A., McBride Oil Co., 506 Olive Street, St. Louis, Mo.

Moore, E. T. president, Simms Oil Co., 1500 Magnolia Building, Dallas, Tex.

(Continued on Page 126)

OIL BOARD NOT AFTER THE INDUSTRY, SECRETARY WORK TELLS CHARLES E. KERN

By Charles E. Kern

WASHINGTON, D. C., Feb. 10.—"We cannot consider the question of storing oil until we know whether there is likely to be any shortage," said Secretary Hubert Work today. "The American Petroleum Institute at Atlantic City said there was overproduction, but can there be overproduction so long as people can produce oil and sell it at a profit? What is overproduction?

"Our mission is purely one of inquiry. What should be done and the conditions that exist are things the oil industry will tell us. We are having fine cooperation."

"Do you find the fear that the oil board might wish to put the oil industry into a straightjacket has been dissipated?" the secretary was asked.

"I think there was never any thought of that kind except in the East. The West never felt that way. So many Government commissions have been operating that the industry may have thought the oil board was to be another such agency. However, the board is only after information. The thought that the Government was after the industry was natural at first."

The oil board is now resting subject to call of its chairman. Answers to questionnaires are steadily coming in but no consensus of opinion on any oil subject has yet been reached.

The board today turned to the technical press of the country in its quest for information and constructive suggestions concerning the problems confronting the general petroleum situation. The production, distributing and refining branches have been asked to give specific technical data. Now the board wishes to hear froh the oil journals.

"The heads of the great oil and gas journals have and will exercise tremendous influence in fostering the best interests of the Government and the industry," said Chairman Work. "The technical press has supported the oil industry with fidelity through all its stages of development and always, so far as the general public and the Government was concerned, has maintained a fine spirit of integrity and independence. From that source the Government can well feel assured of sound advice and helpful assistance."

He said the letter of inquiry of the technical press will be completed in about 10 days.

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MEMBER AUDIT BUREAU OF CIRCULATIONS

WASTE CHARGE WITHDRAWN

There are two significant phrases in the third questionnaire sent out to oil men by Chairman Work of the Federal Oil Conservation Board.

Having, he says, asked in the previous letters, for constructive suggestions from the industry relative to the "reputed waste" in the production of oil in this country and also for information regarding foreign exploration and development, the board is now asking for all available data pertaining to "Efficiency in Production."

If the cooperation on the part of the industry, which Chairman Work says has been prompt and sympathetic, has already resulted in the official modification of the original assertion of "methods wasteful to an alarming degree" into merely "reputed waste" it is evident the board is profiting from the information placed at its disposal.

Furthermore, its most recent questionnaire is concerned with securing "efficiency in production," a more positive and constructive program than an inquisition into reputed waste which the answers from the industry are showing very conclusively and convincingly cannot be charged against it.

In another paragraph of his letter Chairman Work handsomely acknowledges that the Government itself has not been free from responsibility for overproduction in a depressed market.

"The Government, as a large producer of oil," he writes, "hopes to benefit by this inquiry, for, like the industry itself, its methods are not beyond improvement."

So he is renewing his appeal to Congress to amend the act which requires the Government to sell a stipulated acreage of Osage leases annually regardless of the effect on overproduction, with the resulting harmful effects to the Indian wards of the Nation, to the oil industry and the public interest.

The Oil and Gas Journal, which voiced the protests of producers against the sale of 100,000 acres in the Osage last March, is glad to record the active interest of Secretary Work in remedying this Governmental handicap upon the industry. The amendment would be a notable result of the attention attracted to the oil situation by the President's appointment of the Conservation Board.

With this sort of beginning great hopes can be entertained for practical and beneficial effects from the inquiry now in progress. The oil industry, as Chairman Work frankly acknowledges, is cooperating promptly and sympathetically. The Federal Board, as evidenced, by the tenor of its questionnaire and accompanying comment, is approaching the subject with an open mind and an evident readiness to correct the mistaken impressions created by the initial announcements.

That there has been temporary overproduction, from which the industry has been the greatest sufferer, is a matter of record, yet since 1918 there has been but one year in which our domestic production equalled our consumption needs. That there have been wasteful methods which the industry has power to check has not been proven, but exactly the contrary.

If the man who makes two blades of grass grow where one grew before is a benefactor of mankind what shall be said of the industry which has made three gallons of gasoline out of the crude oil that formerly produced but one gallon?

That very efficiency which is the most tangible type of conservation of our natural resources, is being used as an indictment of the industry rather than as a tribute to its usefulness. Uninformed or malicious agitators are already pointing to a record production of gasoline in December as not justifying advancing prices.

They entirely ignore the fact shown in the same report that at the close of December there was but 55 days' supply against 64 days' supply at the end of 1923; that the gasoline for the season of highest consumption must be made during the winter months and that the increased price for gasoline is but following the rapidly increasing prices for crude oil in the face of declining production.

Notwithstanding this decrease in available raw material the index price for gasoline today, compared with 100 in 1914, is but 112, while breadstuffs are selling at 194 and non-agricultural products as a whole at 174. Gasoline thus continues to be, as it was before the war, through the war and since, the cheapest of all commodities.

These are facts that the Federal Conservation Board may well develop and certify for public information.

The politicians who are seeking to make capital out of the necessary advances in gasoline prices at this time and the uninformed people they mislead would do better to turn attention to the almost universal increases in gasoline taxes now being proposed in the State Legislatures throughout the country.

The days of a nominal 1-cent tax on gasoline appear to have departed. Legislatures finding it so easy to get away with a 2-cents gasoline tax are now asking for 3, 4, 5 and even 6 cents a gallon taxation.

What other commodity in general use is taxed such a percentage of its price? Gasoline users have already contributed millions to the State treasuries for licenses to operate cars but it is getting to a stage where the tax on gasoline is a heavier impost than the license.

Many States are now collecting or seeking to collect from motorists more money than the distributors of gasoline actually receive for all the service given at the filling stations.

What this country needs as much as it needs a program for conservation of oil is a popular understanding of the oil business that will permit the Government and the industry to work together for the most efficient development of America's petroleum resources.

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Big Increase in Oklahoma Production

Reports Filed With State Auditor For Last Quarter of 1924 Show Gain in Output of 7,670,454 bbls.

The gross production of crude petroleum in Oklahoma for the last quarter of 1924, as shown by reports filed up to Monday of this week with the State Auditor, totaled 46,970,149 bbls., an increase of 7,670,454 bbls. over the production for the third quarter. The report given below is complete insofar as the records of the State Auditor's office are concerned at this time. Some companies may not have reported to the State Auditor as yet and the production their reports would show, naturally would increase the total output of the State during the last three months of last year.

A	
Aaronson, C. T., Tulsa	2,740
Abicht Drilling Co., Tulsa	1,702
Acacia Oil & Gas Co., Pawhuska	1,329
Acta Oil Co., Okmulgee	2,006
Adams & McGahey, Ardmore	178
Adams & Prince, Ardmore	1,657
Aggas, John, Morris	275
Aladdin Oil Co., Kansas City, Mo.	248
Albert, W. O., Tulsa	346
Albion Oil Co., Tulsa	9,129
Alcorn Oil Co., Tulsa	47,253
Aldrew Oil & Gas Co., Tulsa	1,869
Alexander-Shakely Pet. Co., Tulsa	5,403
All American Oil & Gas Co., Oklahoma City	4,205
Allen, G. R., Tulsa	536
Allen, J. R., Tulsa	1,035
Allen, M. L., Morris	225
Allen Well Co., Allen	636
Allison, J. P., Okmulgee	1,086
Almeda Oil Co., Bartlesville	4,256
Alton Oil Co., Bartlesville	228
Amerada Petroleum Corp., Tulsa	1,231,415
American Contracting & Producing Co., Bartlesville	265
American Eagle Oil Co., Bartlesville	27,508
American Oil Development Co., Pittsburgh, Pa.	10,814
American Oil & Gas Co., Bartlesville	5,358
American Pipe Line Co., Wichita Falls, Tex.	3,702
American Royalty Petroleum Co., Tulsa	2,380
Amster, N. L., Boston, Mass.	36,589
Anderson, Nell M., Sapulpa	150
Andes Oil Co., Tulsa	354
Anolu Pet. Corp., Blackwell	1,400
Anthony, S. W., Mounds	1,058
Arkansas Fuel Oil Co., Pittsburgh, Pa.	2,692
Armstrong Trust Co., Tulsa	780
Arthur Oil Co., Sistersville, W. Va.	8,168
Ashland Oil Co., New York, N. Y.	6,288
Associated Oil Prod., Chicago, Ill	4,305
Atchison Oil & Gas Co., Atchison, Kans.	2,214
Atlantic Oil Prod. Co., Dallas, Tex.	137,307
Atlantic Pet. Corp., Tulsa	153,565
Aubyme Oil & Gas Co., Garber	4,270
Avery, Cyrus S., Tulsa	125
Avery Oil & Gas Co., Tulsa	2,109
Aymer, Charles, Nowata	589
Aztec Oil Co., Tulsa	25,171
B	
Bailey, Evan P., Tulsa	385
Bailey, K. E., Trustee, Tulsa	2,069
Bailey, S. H., Tulsa	385
Baker, The Oil & Gas Co., Independence, Kans.	146
Bail, Cora G., Trustee, Coffeyville, Kans.	1,205
Baltic Operating Co., Bartlesville	13,115
Bamm Oil Co., (W. A. Goforth, Recorder) Tulsa	239
Banford Oil Co., Tulsa	145
Barbara Oil Co., Okmulgee	20,336
Barber Oil Co., Tulsa	353
Barber, R. W., Okmulgee	1,657
Barker, Harry C., Poughkeepsie, N. Y.	1,341
Barnsdall Oil Co., Tulsa	395,755
Bartlett, D. A., Trust (The Peoples Banking & Trust Co., Trustee) Marietta, Ohio	289
Bartlett, J. B., Tulsa	485
Bartlett, R. H., Receiver, Tulsa	5,693
Bauder & Franklin, Tulsa	37
Baum, Henry, Ardmore	598
Baxter, L. W., Tulsa	650
Bay State Oil & Gas Co., Kansas City, Mo.	19,884
Bay State Oil & Gas Co., Kansas City, Mo., & The Paden Oil Co., Oklahoma City, Oklahoma City	5,861
Baynes, John A., Exec., Mounds	1,209
Beacon Oil Co., Bartlesville	13,650
Beal, C. E., Marietta, Ohio	1,068
Beams, Drew, Okmulgee	1,794
Beasley, S. A. & M. S. Musselliem, Muskogee	80
Beattie, R. L., Trustee, Bartlesville	210
Beau-Ard Oil Co., Ardmore	580
Bebout, W. M., Bartlesville	310
Becker & Hutchinson, Okmulgee	20
Beggs Oil & Gas Co., Okmulgee	18,648
B. Jack Oil Co., Sapulpa	722
Bell Oil & Gas Co., Warren, Pa.	5,804
Ben Franks Oil Co., Enid, Okla.	617
Benage, F. L., Nowata	1,412
Berg, The Charles E. Co., Inc., Caney, Kans.	2,115
Bergen Oil & Gas Co., Tulsa	5,473
Berknel Oil Corp., New York, N. Y.	2,100
Berlin & Duffield, Tulsa	2,017
Bermingham, J. A., Fort Worth, Tex.	10,901
Berry Pet. Co., Tulsa	128,846
Berry, George D., Coffeyville, Kans.	449
Best, Edward, Nowata	267
Best, F. A. & W. J. Lambert, Tulsa	195
Best, George C., Estate, Marietta, Ohio	1,113
Betty Ruth Oil Co., Broken Arrow	333
Biddle Oil Co., Tulsa	1,438
Big Windy Oil Co., Tulsa	687
Billingsley, F. R., Tulsa	18,474
Billy Oil Co., Chelsea	147
Bingham, O. A., Okmulgee	966
Bingham, W. B., Okmulgee	955
Bingham, W. B., Trustee, Okmulgee	485
Bingham, Smith Oil Co., Okmulgee	4,268
Bird, Gaffney & Simons, Bradford, Pa.	1,754
Bird Creek Oil & Gas Co., Tulsa	1,025
Bisett, Lytle & Gray, Tulsa	5,322
Bishop Oil Co., Tulsa	173
Black, J. J., Phoenix, Ariz.	170
Black, John R., Corsicana, Tex.	179
Black, O. C., Tulsa	1,927
Black Gold Producing Co., Tulsa	9,591
Black Panther Oil & Gas Co.-Turner & Stone, Trustee Oklahoma City	25,016
Black, Sivalls & Bryson, Inc., Bartlesville	8,522
Blackstone Oil Co., Tulsa	2,019
Blackwell Oil & Gas Co., Blackwell	496,609
Blake, William, Tulsa	99
Blakeslee, H. W., Nowata	1,450
Bloch Oil Co., Tulsa	1,002
Bloch, J. H., Tulsa	831
Bokma Oil Co., Walters	967
Bole, George S., Tulsa	41,709
Boles, Neal & Perry, Cleveland	770
Bolivar Run Oil Co., Tulsa	1,926
Bond, J. R., Oil Co., Oklahoma City	1,168
Boop, Sitz, Glass & Calvert, Nowata	137
Borealis Oil Co., Oklahoma City	94
Bovaird, W. M., Sapulpa	12,100
Boyn, Alex, Okmulgee	904
Braden Co., The, Tulsa	896
Braden & Clinkscale, Tulsa	630
Braden & Moore, Tulsa	14,065
Braden, Overton & Braden, Tulsa	2,122
Bradfield, C. H., Receiver, Tulsa	421
Bradfield, C. H., Receiver, Tulsa	8,815
Bradley, E. A., et al, Tulsa	2,840
Bradnorking Oil & Gas Co., Tulsa	814
Bradstreet, J. G. & Co., Tulsa	380
Brady, E. H., Tulsa	1,017
Brady, E. H. Tulsa-Fred Swanson, Est., Chanute, Kans., John Swanson & Dan Kelly, Marietta, Ohio	2,074
Brann, James, Bartlesville	2,990
Brann, James, Receiver, Bartlesville	912
Branson & Harmon, Nowata	1,751
Brecht, W. H., Broken Arrow	550
Breene, Frank M., et al, Tulsa	2,616
Breene, Frank M., Trust, Estate, Tulsa	49,818
Brewer, R. C. Receiver, Chelsea	489
Brewer, R. P., Trustee, Tulsa	41,672
Bridgeman, Welsh & Haner, Muskogee	816
Bridgman, F. R., London, Ohio	1,238
Bright, Samuel, Okmulgee	1,682
Brinton, M. A., Harrisburg, Pa.	827
Brittain, R. E., Oklahoma City	8,191
Britton-Johnson Oil Co., Tulsa	12,737
Brock, C. N., Okmulgee	645
Brock, John L., Jr., Okmulgee	8,215
Brothers Oil Co., Inc., Tulsa	31
Brown Charles H., Oklahoma City	45
Brown, D. D., Trustee, Kansas City, Mo.	4,889
Brown, L. H., Kansas City, Mo.	67
Brown, Guy Oil Co., Wichita Falls, Tex.	6,285
Bruen, Rigdon & Bruen, Kansas City, Mo.	616
Brundred Oil Corp., Oil City, Pa.	1,958
Bruner, A., Tulsa	241
Bruner Oil Co., Independence, Kans.	602
Bucher, P. O., Bartlesville	445
Buckles, C. O., Tulsa	1,824
Buffalo & Oklahoma Oil Corp., Buffalo, N. Y.	148
Bull Head Oil Co., Ardmore	875
Burke & Greis, Tulsa	805
Burke-Greis Oil Co., Tulsa	130,518
Burke-Hoffeld Oil Co., Tulsa	18,581
Burman Oil Co., Tulsa	2,089
Burns, J. R., Lawton	153
Burton, Dan A. & W. Dickenson, Tulsa	249
Burton Springfield Oil Corp., Tulsa	5,529
Bushfield & Co., Chelsea	554
Butler & Johnstone, Oklahoma City	208
Buttram Pet. Corp., Oklahoma City	121
Buttram, Frank A., Oklahoma City	38,430
Bu-Vi-Bar Pet. Corp., Bristow	1,736
Byers, Myrtle S., Gdn., Nowata	17
Bynum, Maude A., Anna Bradley, Irene Hildretch, Edith Parr, Tulsa	2,024
C	
Callahan Oil Co., Omaha, Neb.	343
Callihan, W. F., Wichita Falls, Tex.	152
Cameron Refining Co., Ardmore	55,655
Campbell Oil Co., Tulsa	7,290
Campbell & Byers, Cherryvale, Kans.	732
Campbell, H. A., Trustee, Nowata	342
Campbell, Nevlin, Bartlesville	157
Campbell, J. A., No. 2, Tulsa	390
Campbell & Wolford, Tulsa	1,335
Canary & Canary, Littleton, Colo.	2,853
Canary, J. D., Littleton, Colo.	4,296
Canary, S. C., Tulsa	10,250
Canterbury, S. L., Bristow	3,200
Carey Oil & Gas Co., Wellsville, N. Y.	656
Carlin, Maud, Haskell	214
Carlin, Opal, Haskell	214
Carlock & Dexter, Ardmore	694
Carner, Akin & Argue, Bartlesville	1,298
Carpathia Pet. Co., Tulsa	22,243
Carr, J. M., Okmulgee	1,173
Carr, M. L., Okmulgee	5,009
Carter Oil Co., Tulsa	2,170,066
Cassidy, Alice M., Admrx., Guthrie	3,436
Cassidy, M. Heirs, (Reported by Skelly Oil Co.) Tulsa	326
Central Pet. Co., Tulsa	13,339
Central States Oil & Gas Co., Tulsa	3,997
Central Union Oil Co., Tulsa	84
Chamberlain, H. G., Marietta, Ohio	421
Champlin Refining Co., Enid	17,209
Champlin & Winkler, Inc., Holdenville	9,437
Chapman, O. H., Waxahachie, Tex.	1,312
Cherokee Land Inv. & Mng. Co., Williamsport, Pa.	666
Chestnut & Smith Corp., Tulsa	14,540
Chestnut & Smith Tulsa	37
Chic-Osage Oil & Gas Co., Tulsa	324
Chief Bigheart Oil & Gas Co., Wichita, Kans.	60
Chief Drilling Co., Okmulgee	147
Choctaw Oil Producing Co., Tulsa	1,422
Cimarron River Oil & Gas Co., Oklahoma City	6,000
Clarion Oil Co., Houston, Tex.	5,600
Clarke, Maurice G., Muskogee	300
Clark, L. P., Independence, Kans.	161
Clark, W. L., et al, Bristow	6,440
Claymo Oil & Gas Co., Clayton, Mo.	477
Cline Oil Co., Wichita Falls, Tex.	150
Clifton & Wise, Sapulpa	60
Clover, Marvin K., Tulsa	924
Clover, M. K. & L. G. Neely, St. Marys, Ohio	3,214
Cobb & Hollingsworth, Ardmore	541
Coe, R. W., Ardmore	2,977
Coe, R. W., Trustee, Ardmore	18,150
Cohen, Aaron, Baltimore, Md.	1,920
Coker, J. M., Claremore	382
Cole, Oil Co., Tulsa	300
Coline Oil Co., The, Oklahoma City	162,561
Collins, Ida M. & Ray M., Tulsa	780
Collins Mortgage Co., Kingfisher	120
Columbia Petroleum Co., Oklahoma City	2,170
Comar Oil Co., St. Louis, Mo.	5,014,225
Commercial Drilling Co., Tulsa	2,907
Commonwealth Oil Co., Warren, Pa.	937
Compton, O. W., et al, Independence, Kans.	311
Congress Oil Co., Kansas City, Mo.	44
Connelly, E. L., Tulsa	200
Connelly, E. L., et al, Tulsa	7,102
Connelly, G. W., Caney, Kans.	1,051
Connar, B. C., Tulsa	20
Constantine, C., Pawhurka	1,314
Continental Oil Co., Oklahoma City,	22,949
Continental Oil & Refining Co., Independence, Kans.	4,529
Continental Supply Co., The, St. Louis, Mo.	1,866
Coombs, Oil, Gas & Land Co., Bartlesville	897
Cora Exploitation Co., St. Louis, Mo.	894
Corona Oil Co.-(N. T. Gilbert & Julius M. Mayer, Receivers) Tulsa	7,161
Correne Oil Co., Tulsa	2,931
Cortez Oil Co., Tulsa	107,371
Cory, L. L., Fresno, Cal.	60
Cosden, J. S., Tulsa	5,177
Cosden Oil & Gas Co., Tulsa	1,500,819
Cotton Belt Pet. Co. (N. T. Gilbert, Receiver) Tulsa	68,307
Cotton Farm Oil Co., Kansas City, Mo.	1,973
Cowham, H. L., Independence, Kans.	940
Cowles, La Monte, Burlington, Ia.	225
Cowling, L. A., Porter	40
Cox, Frank, Shoshone, Idaho	160
Cozart Oil Co. (Dave Schoenwald Recorder) Blackwell	2,122
Craig, D. F., Independence, Kans.	60
Crawford, J. W. R. & Crawford Sons, Inc., Tulsa	440
Creekmore, Morrison & Wolfe, Tulsa	605
Cremsi Oil Co., Bartlesville	170
Creo Oil Co., Tulsa	22,140
Crescent Oil Co., Bartlesville	600
Crews Estate Oil & Gas Prod., Enid	27,423
Critchlow, W. S., Ardmore	77
Crosbie, Davis, Sloan & Sturm, Tulsa	2,570
Crosbie & Gillespie, Tulsa	6,050
Crosbie, Sturm & Davis, Tulsa	2,660
Crosby Drilling Co., Inc., Olean, N. Y.	437
Cruce & Potter, Tulsa	1,943
Cruce, Smith Cruce, Ardmore	2,796
Crump & Beard, Duncan	2,970
Cudahy Oil Co., The, Cleveland, Ohio	26,200
Cumberland Oil & Gas Co., Muskogee	400
Curtis & Aiken, Tulsa	615
Curtis W. L. Co., Elmira, N. Y.	329
Curtis, W. L. Co. & F. M. Aiken, Inc., Elmira, N. Y.	2,304
Cusack, F. E., Okmulgee	2,533
Cushing Gasoline Co., Tulsa	13,329
Custer Oil Co., Okmulgee	1,000
D	
Daisy Belle Pet. Co., Ardmore	8,331
Dallas Co., Tulsa	6,920
Damme-Pringle Oil & Gas Co., The, Okmulgee	743
Damon Oil Co., Tulsa	2,250
Dana Oil Co., Bartlesville	967
Danciger Oil & Refining Co., Tulsa	1,010
Dannenberg, N. B., et al, Chelsea	1,520
Dannenberg, N. B., Estate, Chelsea	300
Davis, Joseph D., Tulsa	1,412
Davis, L. R., Tulsa	453
Davis, R. D., Cleveland	1,507
Dean, John, Estate, Guthrie	172
Deaver, C. H., Trustee, Okmulgee	270
Deems, H. C., Tulsa	
Deep Rock Oil & Refining Co., Chicago, Ill.	48,900
Deep Fork Oil Co., Marietta, Ohio	2,032
Delmar Oil Co., Bartlesville	124,857
Delna Oil & Gas Co., Muskogee	1,500
Delokee Gas & Oil Co., Bartlesville	1,462
Demack Oil Co., Tulsa	754
De Soto Gasoline Co., Houston, Tex.	1,303

NEWS—OR HISTORY?

The value of a news publication to its readers is the speed with which it gives them the current news. They buy it for the news,—not for history. "News" that everybody knows is water that has gone over the dam.

The Oil and Gas Journal prides itself on its record of publishing the news when it is hot. When President Walter C. Teagle delivered his notable address before the American Petroleum Institute at Fort Worth, the big news of that convention, it was reported exclusively and in full in The Oil and Gas Journal of the current week. It did not appear in other publications until a week later, when everybody interested had already read it in The Oil and Gas Journal.

But this is characteristic. The Oil and Gas Journal began the movement to tell the public the story of oil in the summer of 1923 and published "The Oil Industry's Answer" March 20, 1924. It was not until the movement had been endorsed by oil organizations and companies throughout the country that another publication attempted imitations, huckstering for sale what The Oil and Gas Journal gave to the industry as part of its regular publication.

Whether it is news or ideas The Oil and Gas Journal, published in the heart of the Mid-Continent, the center of the oil industry, is always first, being right on the spot. It does not have to wait for telegraphic summaries thousands of miles away. All the news of the oil industry is focussed right at its door; written, put into type and printed in The Oil and Gas Journal's own plant where every modern time-saving equipment is at hand to speed the news to the reader.

Naturally The Oil and Gas Journal leads. It would be ashamed if it didn't with all these advantages of location, equipment and organization.

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De Vinna, M. A., Tulsa 674
Devonian Oil Co., Tulsa 43,914
De Watt Oil & Gas Co., Okmulgee.. 1,924
Dewey Portland Cement Co., Dewey Okla. 504
Dick, John, Buffalo, N. Y. 210
Dickerson O. W. Oil Co., Okla City. 137
Dierks, Fred H., Trustee, Kansas City, Mo. 1,736
Digges Oil Co., Tulsa. 98
Dilley, N. Y. Trustee, Waurika 2,733
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Doak, Jas. Cushing. 255
Dock Oil & Gas Co., Bartlesville ... 925
Dolman, L. S., Walter H. Gant & S. W. Tyer, Ardmore 11,254
Donohue, W. J. & K. D., Bartlesville 90
Doris Oil & Gas Co., Tulsa 832
Douglass, Harvey, Attorney, Chelsea 296
Dover Oil Co., Bartlesville 920
D. & S. Oil & Gas Co., Tulsa 1,389
Duffield & Howard, Tulsa 6,141
Duffield, Lewis C., Tulsa. 746
Duffield, L. C. & H. R. & Catherine, Straight, Tulsa 5,083
Dunn, J. J., Okmulgee 598
Dunn Mineral Trust, Ardmore 5,223
Dunn Oil Co., Tulsa 397
Dunnington, A. S., Tulsa. 251
Dwyer, J. D., Tulsa 7,436

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Eagle Picher Lead Co., Henryetta .. 6,761
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Eason, T. T., Enid 239
Eastern Oil Co., Buffalo, N. Y.. 162,650
Ebling, L. R. & Co., Bartlesville... 1,703
Echo Oil Co., Tulsa 32,311
Edgington, L. D., Hominy 334
Eliza Tim Oil Co., Sapulpa 402
Elk Producing Co., Tulsa 1,043
Elliott & Smith, Tulsa 7,325
Elliott & Vensel, Tulsa 14,946
Elliott, W. C., Tulsa. 518
Ellis, M., Tulsa 6,330
Elm Oil Co., Tulsa 4,272
Elmer Oil Co., Elmira, N. Y..... 2,588
Emery, Lewis, Jr., & Sons, Bradford Pa. 16,790
Emery Bros., Bradford, Pa. 4,147
Empire City Co., Tulsa. 1,913
Empire Gas & Fuel Co., Del-Okla., Bartlesville 141,446
Empire Gas & Fuel Co., Del-Ark. Bartlesville. 107,492
Enfisco Oil Corp., Tulsa. 19,337
Enid & Oil & Gas Co., Enid 372
Enterprise Transit Co., Titusville, Pa. 5,065
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Fagar Oil & Gas Co., Garber 3,737
Fair, H. G., J. F. Patterson & L. B. Norton, Okmulgee 21,263
Faltinson, A., Tulsa 13,439
Fan-Elva Oil & Gas Co., Pittsburgh Pa. 3,139
Farco Oil Co., Ltd., Okmulgee..... 279
Farmer, A. L. & A. E. Duran, Tulsa 555
Farren, C. F., Tulsa 12,152
Fay Drilling Co., Tulsa. 310
Federal Oil Co., Cleveland, Ohio ... 174
Fee Oil Co., Muskogee 201
Fellows, Ray S., Tulsa 403
Fellowship Oil & Drilling Co., Tulsa. 356
Fern Oil & Gas Co., Yale 5,174
Ferrell, A. T. (Reported by Skelly Oil Co.) Tulsa 1,033
Fewel, Green A., Muskogee 1,045
Fidelity Oil Corp., Louisville, Ky. 926
Fifty-nine Osage Oil Co., Bartlesville 48,822
Finance Oil Co., Pawhuska 46,102
Finch, F. L., Tulsa 2,136
First National Bank, Broken Arrow 130
Fisher Oil Co., The, Pittsburgh, Pa.. 727
Fitch, R. L., Rose Stekoll, H. C. McIntyre & G. W. Groves, Tulsa... 160
Fitzgerald, D. C., Trustee, Ardmore 19,665
Fitzgerald, H. L., Tulsa 133
Fitzgerald, John W., Bartlesville .. 324
Fitzgerald & Withington, Tulsa.... 1,142
Flanagan & McGrath, Delaware ... 214
Flat Rock Oil Co., Tulsa. 1,665
Fleming & Bedford, Chelsea 130
Flynn, P. B., Mounds 68
Force Oil Co., Tulsa 302
Forster, S. F., Dallas, Tex. 1,167
Fort Ring Oil & Gas Co., Fort Worth Tex. 6,506
Fortuna Oil Co., Dallas, Tex. 379,176
45 Oil Co., The, Chicago, Ill. 7,112
Foster & Davis, Inc., Bartlesville .. 10,393
Foster Investment Co., Tulsa. 155,720
Foster & Leech, Bartlesville 163
Foster Pet. Corp., Bartlesville 56,205
Fox Pet. Co., Ardmore 6,868
Fox, W. T., Sapulpa 351
Franehot, D. W. & Co., Tulsa. 27,408
Francis, William C., Skiatook 220
Franklin Oil Co., Franklin Pa. 676
Franklin Oil & Development Co. Nowata 1,088
Franklin, Wirt, Ardmore 81,972
Frederick, H. B., Tulsa 119
French, M. C., Okmulgee 941
Friedman, Loues, Tulsa 197
Friedman, Loues Oil Co., Tulsa 1,233
Funk, A. L., Tulsa 2,200
Funk, C. R., Urbana, Ill. 80

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Gaffney, H. B. & Estate of H. E. Gaffney, Bradford, Pa. 2,677
Gaffney, Olive & Estate of H. E. Gaffney, Bradford, Pa. 1,107
Galbraith, H. H. et al, Independence Kan 2,178
Galvez Oil Corp., Tulsa 56,065
Ganas, John, Pawhuska 310
Gamo Oil Co., Claremore 494
Gant, Walter H., Ardmore 6,425
Gardner & Avery, Tulsa 410
Gardner, J. K., Okmulgee 1,230
Gardner Oil Co., Tulsa 120
Gardner Pet. Co., Tulsa. 37,316
Garis, Ralph, Chelsea 45
Garnett, M. R., Agt., Nowata 133
Gates-Cook Drilling Co., Okmulgee 419
Gates Oil Co., Ardmore 34,120
Genevra Oil Co., The, Bartlesville.. 780
Geneva Pearl Oil & Gas Co., Ardmore 3,485
Georgia Oil & Gas Co., Copan 2,781
Getty, George F. et al, Tulsa 1,172
Getzendaner, R. W., Waxahachie, Tex. 1,734
Gibson-Zahniser Oil Corp., Tulsa .. 51,623
Giddings, F. C., W. H. Gray, A. B. C. Dague, C. F. Egan & R. A. Welch, Tulsa 1,077
Gilbert, N. T. Special, Tulsa 1,034
Gilchrist, H. M., Estate, Bartlesville 2,093
Gilcrease Oil Co., Tulsa 8,291
Gilcrease, Thomas, Tulsa 6,355
Gill, A. J., Okmulgee. 196
Gillespie, F. A. & Sons, Tulsa 32,499
Gillespie, Joe, Coffeyville, Kans... 71
Gillette, J. M., Tulsa 1,033
Gilliland Oil Co., Tulsa 133,522
Gilmer Oil Co., The, Ardmore 38,625
Gilmer Oil Co., Lamine, Mo., ... 47
Glass & Harmon, Nowata 4,493
Glass, J. Wood, Nowata 457
Glass, Reed & McSpadden, Nowata 248
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Gled Oil Co., Tulsa 1,889
Glidden, H. P., Tulsa 769
Godfrey, F. L., Enid 1,786
Goldie Oil & Gas Co., Kansas City Mo. 689
Goodyear Oil Co., Tulsa 3,402
Gorman M., Trustee (Stahl & Horrigan), Ardmore 1,075
Goss, A. H., Tulsa 1,033
Great Southwestern Pet. Co., Okla. City 384
Greenfield Trust Co. The, Rock Island, Ill. 860
Greenwalt, H. L., Okmulgee 536
Greeg, C. O. Ardmore 5,096
Greis, H. M., Tulsa 22
Grieves, John B., Teriton 7,297
Grimes, Blair, et al, Tulsa 497
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Grimes & Gillespie, Tulsa 22,369
Graham, J. N., Bushyhead 118
Graham, James H., Bartlesville .. 10,538
Graham Mineral Trust, Ardmore . 4,302
Graham, W. M. Oil & Gas Co., Prairie Oil & Gas Co., Trustee, Independence, Kans. 22,877
Grand Duke Producing Co., Muskogee 583
Gray Oil Co., Tulsa 11,090
Guardian Oil Co., Inc., Tulsa 11,860
Gypsy Oil Co., Tulsa 7,884,592

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Haley, E. J. Okmulgee 64
Hales, W. T., Oklahoma City.... 107,817
Haley, Garber & Pulse, Garber .. 2,175
Halfest, E. W., Muskogee 375
Halfmoon Oil Co., Bartlesville ... 691
Hall, C. R., et al, Bartlesville..... 325
Hall, John M., Tulsa 482
Hall-Briscoe, Tulsa 2,067
Hall & Lucas, Duncan 675
Halsell & Son Oil & Gas Co., Vinita 988
Hambro Oil Co., St. Louis, Mo.... 2,557
Hamburger Brothers, New York N. Y. 89
Hamill, A. W., Tulsa 361
Hamilton, W. R., Dewey 868
Hammat, D. M. & Co., Tulsa 1,127
Hamon, Jake L., Estate, Ardmore . 22,417
Hamon, Jake L., Jr., Ardmore 1,714
Hamon & Colcord, Ardmore 16,750
Hancock Oil Co., Tulsa 324
Hancox, T. H., Tulsa 346
Hand, H. M., Tulsa 151
Hane, C. E. Agent, Tulsa 6,595
Haner, J. L., Muskogee 215
Haner Oil & Refining Co. Muskogee 215
Hannis Oil Co., Tulsa 211
Harland Oil Co., Pittsburgh, Pa. .. 27,580
Harmon, C. C., Nowata 1,788
Harrington, Lillian F. No. 4, Tulsa 46
Harrington, Lillian F., No. 5, Tulsa 203
Harrington, W. J., Coffeyville, Kan. 1,813
Harrington, William, Marietta Ohio 155
Harris, Mrs. L. C., Rising Sun Ind. 408
Harris, T. D., Trustee, Okmulgee . 30
Harris, Haun & O'Shaughnessy, Blackwell 1,554
Harris-Strawn Oil Co., Ardmore .. 7,530
Harris-Hays Co., Okmulgee 1,649
Hartley & Suggs Eldorado Springs Mo. 553
Hartman & Mann, Pittsburgh, Pa. 181
Harts, Ben., Baltimore, Md. 364
Harwell, E. P Tulsa 25,687
Haskell, F. K Bartlesville 161
Haskell, F. K., Agent, Bartlesville. 1,573
Hastings, W. T., Marietta, Ohio... 423
Hatch, G. W., Nowata 213
Haury-Manahan & Co., Blackwell . 8,474
Hazen, S. P., Tulsa 140
Hazlett, A. G., Morris 1,754
Hazlett, Bradford & Frazier Bros. Eldorado, Kans. 3,419
Hazlett, Robert H. et al, Eldorado Kans. 792
Hayde, John F., Tulsa 1,158
Hays Oil Co., The, Oil City, Pa.... 433
Healdton Oil & Gas Co.,-Enid 102,523
Healdton Field Oil Co., El Reno.. 1,131
Heenan, J. A., Ardmore 2,077
Hefner Co., The, Ardmore 1,187
Heggem & Davis, Tulsa 2,887
Helene Oil & Gas Co., Tulsa..... 68,823
Henderson, Co., The, Nowata 131
Henderson & Holden, Eldorado, Kans. 962
Hendricks, H. G., Bristow 200
Hennessey, J. E., Okmulgee 1,348
Hennessey, J. E. & J. H. Thompson, Okmulgee 152
Henry, J. W., Tulsa 3,476
Henry & Avers, Tulsa 1,005
Henson Producing Co., Tulsa 1,149
Herbert Oil Co., Fort Worth Tex. 3,627
Hertzel, F. E., Warren, Pa. 1,612
Hewitt, W. M. (W. M. Hewitt) Okmulgee 3,547
Hibbard, S. B., S. S. Glasscock & John Hammond, Trustees, Kansas City, Mo. 1,704
Hikernell, G. W., Warren, Pa. 423
Higgins Oil & Fuel Co., & Pulaski Oil Co., Tulsa 2,531
Highway Oil Refining Corp, Tulsa. 3,571
Hildreth, M. A., Drumright 334
Hill Oil & Gas Co., Tulsa 205,130
Hillside Oil Co., Tulsa. 3,861
Hilltop Oil Trust, Ardmore 6,357
Hinerman & Marshall, Tulsa 5,440
Hinkle, Fitzgerald & Westhimer, Ardmore 13,304
Hippodrome Oil Co., Tulsa 781
Hiram Oil & Gas Co., Kellyville ... 1,700
Hiteshew, W. B., Trustee, Robinson, Ill. 870
Hivick, L. C. & J. P. & Night & Day Oil Co., Ardmore 500
Hivick & Stone, Okla. City. 693
H. & M. Pet. Co., Tulsa. 1,586
Hoefer, Perry A., Ponca City 7,340
Hoffbauer, M. H., Tulsa 440
Hofer Oil Corp., Fort Worth Tex... 38,683
Hoge, J. B., Nowata 300
Hojoco Oil Co., Tulsa 300
Hollingsworth, George C., Ardmore 3,911
Hollis, Elsie B., Los Angeles, Cal. 330
Haley Oil & Gas Co., Tulsa 14,486
Holm, Coomba & Chapman, Bartlesville 972
Holm, H. J., Trustee, Bartlesville.. 1,400
Holtzendorff, C. B., John Q. Adams, Alex A. Dennison, A. D. Lusing, Claremore 330
Homaokla Oil Co., Okla. City..... 32,150
Home Gas Co. of Cushing, Cushing 16,490
Hornecker, Frederick & Hagler, Tulsa 90
Hornecker & Graham, Tulsa 933
Hornecker & Hagler, Tulsa 2,947
Hornecker, Henry, Tulsa 1,330
Hornecker, Miller & Dunnigan, Tulsa 920
Horner, W. H., Cleveland 340
Houser, M. A., Trustee, Tulsa 600
Houston Oil Co. of Texas, Houston, Tex. 4,000
Howard, Duffield & Berlin, Tulsa 11,390
Howard, O. R., Tulsa 37,180
Howarth, Floyd O. Oil & Gas Co., Tulsa 7,900
Huckleberry, J. H. (No. 5, Kansas City, Mo. 10
Huddleston, C. P., Okemah 567
Hudson Oil Co., Wellsville, N. Y. 900
Hudson, Grimes et al, Tulsa 900
Hughes, R. A., Cygnet, Ohio 600
Hughes, M. S., Bristow 923
Hughes, R. H., Tulsa 500
Hughes & Schwyn, Cygnet, Ohio ... 672
Hughes, Solether & Brecht, Cygnet Ohio 970
Hulen, H. E., Bartlesville 1,782
Hulings, M. C., Tulsa 360
Hulings & Smith, Okmulgee 450
Hull, J. A. Co., Tulsa 26,000
Hull, J. A., Tulsa 900
Hull, J. D., Tulsa 30
Humble Oil & Refining Co., Houston, Tex. 300,550
Hummel, Charles S., Chelsea 600
Humphreys, L. L., Duncan 3,330
Hunt & Grastorf, Colorado
Hunt & Grastorf, Colorado Springs Colo. 1,200
Hurdle, H. J., Mounds 300
Hurford, G. H., Tulsa 775
Hutch Oil & Gas Co., The, Kansas City, Mo. 977
Hutchison, E. A., Trustee, Bartlesville 630
Hyer, F. R. & Hubert Dennis, Boynton 20

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Ideal Oil & Gas Co., Ardmore ... 2,800
Ideal Royalty Co., Tulsa 1,800
Illinois Refining Co. & Kawfield Oil Co., Cushing 8,330
Imo Oil & Gas Co., Covington.... 12,604
Independent Oil Co., Okmulgee .. 311,073
Independence Oil Co., Independence, Kan. 1,533
Indiahoma Corp., Okmulgee 6,700
Indiahoma Refining Co., J. H. Ober Treasurer, St. Louis, Mo. 6,600
Indiana Oil & Gas Co., Tulsa 33,750
Indian Territory Illuminating Oil Co., Bartlesville 54,900
Interstate Oil & Gas Co., Bartlesville 2,300
Invader Oil Co., Muskogee 3,600
Irelan, O. M., Sapulpa 2,134
Iron Mountain Oil Co., The, Tulsa 20,000
Irvine, James, Sapulpa 340
Irwin, John S., Bartlesville 600
Irwin & Miller, Bartlesville 900
Iowa Oil & Refining Co., Hawarden, Iowa. 3,600
I. X. L. Drilling Co., Tulsa 1,800

J

Jackson, L. B., Sapulpa 600
Jackson, Wise & Bovaird, Sapulpa 2,000
Jackson, Wise & Markham, Sapulpa 2,000
Jackson, Wise & Snedden, Sapulpa 1,500
Jacques, Denton & Effie M. Arkansas City, Kan. 2,200
Jameson, John B., Concord, N. H. 1,700
Jane Oil Co., Oil City, Pa. 2,400
Jankowsky, Mose, Tulsa 3,600
Jeffrey, E. B., Trustee, Okla. City 2,700
Jelinek, John, Nowata 240
Jennie Oil Co., Chelsea 300
Jennings, E. H. Bros. Co., Pittsburgh, Pa. 2,200
Jennings, Edward H., Estate & R. F. Jennings, Pittsburgh, Pa..... 900
Jennings, R. G. & Snowden & McSweeney Co., New York, N. Y. 6,975
Jennings, R. G., Pittsburgh, Pa. .. 15,284
Jensen, P. W., Chelsea 363
Jewel Oil Co., Tulsa 196
Jim-Glenn Oil Co., Tulsa 10,295
Johneda Oil Co., Tulsa 44,272
Johnson, Arthur, Duluth, Minn... 150
Johnson, C. L., Kansas City, Mo... 60
Johnson, Farm Oil Co., Warren Pa. 1,100
Johnson & McGill, Ardmore 61
Johnson Oil Ref. Co., Chicago, Ill. 9,000
Jomac Oil Co., Bristow 117,000
Johnson, T. E., Nowata 60
Jones, R. C., Cushing 2,400
Josey Oil Co., Tulsa 175,000

WILDCATTING IN OKLAHOMA MADE DIFFICULT BY NEW CONDITIONS

By James McIntyre

Wildcatting in Oklahoma is becoming increasingly difficult and increasingly expensive, besides being surrounded by new and entangling conditions little or not known in the distant past.

Casting the mind's eye over the area from which the production of the future in Oklahoma must come if it is to come at all, the wildcatter can see only areas necessitating the drilling of deep wells. The days of the 1,000-foot well in Oklahoma are practically gone forever and the days of the 2,500-foot well are on the wane. Now the wildcatter is in the stage of the State's oil development where a 4,000-foot hole is necessary if he is to give his property an adequate test, and even that depth is insufficient in some sections of the State. While there is much loose talk about possible 6,000-foot production, with the exception of the area west of Osage, Pawnee and Payne Counties, and in southern end of the Greater Okmulgee district (in Seminole County and its neighborhood) the 6,000-feet test is out of the question because of the presence of granite. This has been repeatedly proven in the older part of the Oklahoma fields, where, in some instances, the granite rises in a spiral form to within 2,500 feet of the surface. But while wells a mile or more deep may not uncover oil or gas in the deep horizons, there are many places yet undeveloped that will require holes of a depth exceeding 4,000 feet and these tests cost a great deal of money. An operator would consider himself fortunate who could drill a wildcat well to that depth under $60,000, a tremendous financial hazard in the face of the known fact that his percentage of chance of finding commercial production is very small.

Another new condition that faces the wildcatter of 1925, who is not already provided with acreage on which to drill, bought when it was very low, is the price at which wildcat acreage is held. For example, the territory in Seminole and Pottawatomie Counties, favorably looked upon as potential oil country, is largely in the hands of speculators, where it is not all owned by oil companies. From $25 to $50 an acre is asked by bankers, lawyers, merchants, and the like, living in the towns nearest the properties under consideration, who paid from a dollar an acre upwards for leases several years ago and have been holding them for just such a situation as now confronts the oil industry—a need for more production. The price is certainly not inviting to the man looking for a sizeable block upon which to drill a test well.

In Lincoln County, a most expensive territory in which to operate, from $5 to $20 an acre is asked. Acreage in Pottawatomie County is not so high, but neither is it as inviting a hazard as Lincoln or Seminole Counties. In any part of the State of Oklahoma where there is any possible chance of oil production it is difficult to pick up a block of acreage, and where it can be done an average of $5 an acre for the wildest kind of wildcat stuff is sometimes blandly asked by the owners, who should be well satisfied to be able to interest an oil man in it as a gift so far as bonus is concerned.

The checkerboarding of acreage is another deterrent to a wildcatter who is not in on the checkerboard play himself. His interest in a particular part of the State receives a cold douche when upon investigation he finds he can only pick up a lease here and there.

A new element entering into the wildcatter's troubles is the business of fractional royalty interests, necessitating long-distance correspondence and more or less expensive legal formalities before the signature of everyone with an interest in a lease is on the dotted line. This element is becoming more common and more annoying to the oil man, but he must face it as there is nothing he can do to change it.

(Continuel on Page 124)

Extra Duty

Simplicity of construction, rapidity of cut, long endurance and the non-necessity for frequent trips in and out the hole, stamp the Reed Roller Bit as an outstanding rock cutting tool of the highest type. The reamer section (with four side wall cutters)—easily detached from the head—may be used with a fishtail or similar bit, thus insuring a clean, straight hole of full gauge.

Every part is built for extra duty.

Doublin' Up

Snappin' thru rock in double quick time, 'thout jumpin' in and out the hole ever few shakes, "sho does hep a heep," and "what it takes to do it—Reed Roller Bits, ain't got nothin' else but."

Hankerin' for a hole that's no corkscrew, don't mean you're "gonna get it," but a Reed Reamer slapped on and kept on all the way down, leaves it straight as an arrow and clean as a whistle.

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HOUSTON

NEW YORK LOS ANGELES

Late News From the Fields

NORTH CENTRAL TEXAS

FORT WORTH, Tex., Feb. 10.—The Texhoma Oil & Refining Co. seems to have brought in a new wildcat well in south Archer County. The company's No. 1 Phillips, a mile west of the Carey Pool, is producing oil at the rate of about 150 bbls. daily. Sand was found at the usual level for this section. It is located in the B. B. B. and C. R. R. survey, about 2½ miles northeast of the Gambrell Pool in northern Young County.

The Roxana Petroleum Corp. has another producer on the Kunkel lease in the Carey Pool, south Archer County, No. 4 Kunkel, which is an offset to the west of No. 2, brought in last week which is still making oil at the rate of 700 bbls. daily after being in for two weeks. No. 4 Kunkel is swabbing and flowing at the rate of 400 bbls. daily.

The Magnolia Co. has laid about 25 miles of additional pipe line throughout the Archer County pools. The line is 4-inch and extends from the company's producing properties on the Parrich lease to its storage tanks between Megargel and Olney. Further extension of the company's gathering system is expected.

Activity seems to be on the increase in Reagan County. The Texon Oil & Land Co. has announced four new locations, all in Section 36, Block 9, University lands. The Big Lake Oil Co. has made an equal number of locations which may be termed offsets to those made by the Texon, though both the officials of the Texon and Big Lake deny stoutly there is a line fight in progress.

Wollett and others' No. 5 Griffith, south Archer County, is making an estimated 150 bbls. from sand at 1,305 feet.

EAST CENTRAL TEXAS

MEXIA, Tex., Feb. 10.—Col. A. E. Humphreys, president of the Humphreys-Boyd Oil Co., announced on Saturday that the Humphreys-Boyd Oil Co.'s first test in the Bazette area, in Navarro County, will be drilled on a location in the northeast corner of the A. T. Walthall farm, which is in the northeast corner of of John H. Milliken survey, 1 mile south of the old town of Bazette, and 3 miles north of the town of Kerens. The derrick is in course of construction and the water connections and fuel arrangements made and drilling will commence some time this week. This will be the most important test in Texas, and one of the most important in any American oil field. It may open up a field which will offset the steadily declining production in other fields and have a potent influence on the crude market structure. On the other hand, it may suffer the fate of numerous other tests northeast of Powell and its only value may lie in what it teaches geologically. In any event, the industry should know just what it is good for within a month's time, if reasonable good luck attends the drilling.

The production of the Wortham Field was 78,864 bbls. at the close of the week from 210 wells. Nine new wells increased the field's production only a few hundred barrels, owing to the rapid falling off of the production of the older wells. On Sunday the production was given out at 66,970 bbls. from 215 wells, or an average of 311 bbls. to the well. Monday's production was 64,039 bbls. from 216 wells, an average of 296 bbls. per well.

Wortham's Production in January

A survey of the production of the Wortham Field in January, made by one of the major companies, puts the production at 3,508,678 bbls., or an average of 113,183 bbls. per day. The Freestone County side of the field supplied 3,416,015 bbls. of the month's production and the Limestone County side 92,663 bbls. A total of 745,894 bbls. came from the Wortham Townsite leases, lying on the east side of town. The production of the Wortham Field in December was 893,358 bbls. and in November 21,240 bbls., giving the field a total production up to January 31 of 4,423,276 bbls.

OKLAHOMA

The Comar Oil Co. has two new wells in the deep sand in the Tonkawa Field. One is the south offset to The Texas Co.'s No. 7 Davis, the farthest northwest well in the field. It is No. 15-W on the Beverlin lease, C NE NE NW, Section 34-25-1w, and topped sand at 4,158 feet, making 2,559 bbls. the first 24 hours at a total depth of 4,185 feet. The other well is No. 8-W, C SE NE NW, Section 34-25-1w, sand 4,117-45 feet, 45 bbls. per hour.

Harris & Haun's No. 1 Brown, SW cor. Section 9-27-1w, in the Blackwell gas field, was making 25,000,000 feet of gas from sand at 3,450-58 feet. This is the fourth well in the field, being offset on the west, south, and southwest by wells which did not have such high production, but which had higher rock pressure.

T. B. Slick's No. 1 Brooks, SE cor. NW, Section 15-9-9, southeast of the Papoose Field, in Hughes County, had a show of gas at 3,422-24 feet, and a hole full of water at 3,433 feet, where the well is now shut down.

William Slocum's No. 1 Murphy, SE cor. SW NE, Section 18-17-16, in Wagoner County, was making 5,800,000 feet of gas from sand at 977-92 feet.

KANSAS

The Sinclair Oil & Gas Co.'s No. 1 Spengler, SE cor. NW, Section 13-32-4, Cowley County, was making 20 bbls. an hour from sand at 2,537-47 feet.

MEXICO

The Corona Petroleum Co.'s No. 3, Lot 11, Corcovado, is making 7,000 bbls., the first strike in this district.

GULF COAST

HOUSTON, Tex., Feb. 10.—The Humble Oil &Refining Co.'s No. 11 Winifree, Orange Pool, credited with 3,000 bbls. initial flow last week, has declined to 600 bbls. per day. Gieske & Davis' No. 1 Malone, north of Houston, is dry at 1,500 feet.

Runs from the Calliham Field, in McMullen and Live Oak Counties, by the Live Oak Pipe Line Co., were 9,680 bbls. during January, against 9,310 bbls. in December. On February 1 the storage was 15,000 bbls. The oil is low gravity and hard to handle in cold weather. It is purchased by San Antonio and Dallas refineries for lubricating stock and brings $1.75, the same as Grade A Gulf Coast. Very few wells have been completed during the past 60 days and the production is declining.

The runs of the Magnolia Petroleum Co. from the Luling Field during January were 334,753.78 bbls. The deep test of the United North & South Co. on the Kelly, was bailed at 4,985 feet and got nothing. It is drilling ahead below 5,150 feet. It is said it will be carried to 6,000 feet if possible. Ross & Green's No. 1 Pryor, 2 miles north of the field, is at 2,120 feet. The United North & South Co. is drilling No. 1 Callahan across Plum Creek, northeast of production, with a location for No. 2. The company has asked permission to erect a dam across Plum Creek for water. On the Caldwell County side the company is drilling Nos. 7 Stair and 10 Trammel.

Jim Hogg County

O. W. Killiam's No. 3 Holbein, in Jim Hogg County, is swabbing 300 bbls. at 1,995 feet. There are now 19 wells and two gassers in the Henne, Winch and Fariss district, but a number of wells are shut in waiting for gas separators. Ten wells completed are on the Holbein ranch. The district is narrow and extends about 1 mile from north to south.

Biffam and others' No. 1 set casing at 2,095 feet. The sand in the discovery well was picked up at 2,002 feet. The Magnolia Petroleum is setting casing in No. 3 Thompson, the Witherspoon Oil Co. in No. 4 and the Plateau-T. P. C. & O. Co. in joint No. 4. These should be swabbing during the week. The production of some wells reported last week is given early this week as follows: Kisselman & St. Alban's No. 1 Holbein ranch, swabbing 1,000 bbls., depth of hole, 2,007 feet; same interests' No. 2 Holbein, swabbing 300 bbls. at 2,002 feet. Plateau-Texas Pacific Oil & Coal No. 3 Holbein, swabbing 800 bbls. at 1,993 feet. Same interests' No. 4, swabbing 800 bbls. at 1,993 feet. Magnolia Petroleum Co., No. 2 Thompson, swabbing 300 bbls. at 2,009 feet.

In the Schott Pool, Webb County, the Rydal Oil Co.'s No. 6 is a gasser, estimated at 3,000,000 feet. It is an old hole drilled deeper after it had ceased to produce.

In the Aviator Pool, Durr & Co.'s No. 1 set casing at 1,865 feet. In the Bruni section, the Cole Petroleum Co.'s No. 6 is drilling at 2,500 feet with a derrick up for No. 7. O. W. Killiam is drilling No. 4 Bruni. In the Caroline-Texas gas district, the Caroline-Texas Co.'s No. 4 is around 2,960 feet.

Southwest Wildcats

In Atascosa County, the Rio Bravo Oil Co. is starting No. 2 Cartines, Delange, Eiser & Co.'s No. 2 Tom is at 3,950 feet. In Bexar County, the Goose Oil Co.'s No. 2 Cantu is around 1,300 feet. In Fayette County, Neal & Garrells are rigging No. 1, on the Colorado River, 2 miles above La Grange. In Guadalupe County, Sights and others, south of Seguin, are at 2,075 feet. In Jim Wells County, the Simms Petroleum Co.'s No. 1 Wade, near Sarnia, is in water at 2,745 feet and trying to pack it off. In Live Oak County, the Houston Oil Co. is drilling No. 8 Cartwright. In Milam County, the Fogel Oil Co. has started No. 1 White. In Pecos County, the Gulf Production Co. is rigging up No. 1 Baker-White ranch. In Wilson County, Hauck and others' No. 1, 9 miles southwest of Floesville, is drilling at 845 feet.

CALIFORNIA

The Shell Co. completed two more wells on its Alamitos lease in the Signal Hill Field. No. 23 Alamitos, one of the largest producers for many months, located a few feet from the discovery well, was brought in from the 4,800-foot level and reported flowing 1,800 bbls. No. 22 Alamitos, on the same lease, has been completed with 400 bbls. a day.

CALIFORNIA PRICES ARE REVISED UPWARD

LOS ANGELES, Cal., Feb. 7.—The anticipated upward revision in California crude and refined prices took place on February 4 so far as the Standard Oil Co. (California) was concerned. Today all other companies have met the Standard's advances. The price changes includes price increases in the crude schedule ranging from 25 cents per barrel on fuel crude of 14 to 20 degrees gravity to 58 cents per barrel for the highest grade.

At the same time the price of gasoline was increased 2 cents per gallon and the priec of engines distillate increased the same amount. It is calculated the increased price of the crude exactly offsets the increased price of gasoline when taking into consideration the average crude put through the various California refineries. Consequently, the average California refiner does not derive any benefit from the revised price schedule. The refiners are affected only to the extent that the crude which they run varies from the average. Those running a crude heavier than the average have suffered due to the revision of prices and conversely those running a high gravity crude have benefited by it. Thus, obviously the oil producer is the one who is benefiting by this change.

The big pipe line companies are all posting special prices for the crude produced in the Athens-Rosecrans Field. This crude is particularly valuable because of its exceptional high gasoline content and because it is available close to the big Los Angeles refinery districts. There has also been keen competition for this crude on the part of the small refining companies clustered around Los Angeles. In view of the fact that bonuses as high as 40 and 50 cents per barrel are being paid for some Rosecrans crude, some handsome prices are being realized by producers, as under the new schedule the average open market price is $2.25 per barrel without taking consideration of bonuses.

Natural gasoline is more than keeping up with the rise in service station gasoline prices. Before the increase was announced yesterday the spot market on absorption natural gasoline was 11 to 11½ cents per gallon. Today it is quoted at 13½ to 14 cents per gallon and hard to get. To a less degree the same is true of the compression gasoline available in the California market.

Kerosene prices have not been changed and it is yet too early to tell just to what extent the kerosene market will stiffen as a result of the increase in prices of the other refined products. The same situation holds in regard to lubricants.

The open market price of fuel oil is also increased 25 cents per barrel, making it $1.65. An exception to this 25-cent increase in the tide water price at San Diego, San Pedro and El Segundo, as well as the price in the city of Los Angeles, where the advance is 20 cents per barrel instead of 25c.

Opinions differ as to the reason for the price increase in California but it is entirely probable the increases were brought about in order to put the Pacific Coast market more in line with the Atlantic Seaboard and Gulf Coast markets. While crude production in California is now slightly below 600,000 bbls. per day, it has hovered in the neighborhood of this figure for a number of months now and there is no immediate prospect of a rapid decline. Oil has steadily been going into storage and it is hardly to be anticipated that any drastic draft will be made on stocks in the next few months although a healthy marekt is expected.

REFINING INVENTION BY WOMAN CHEMIST

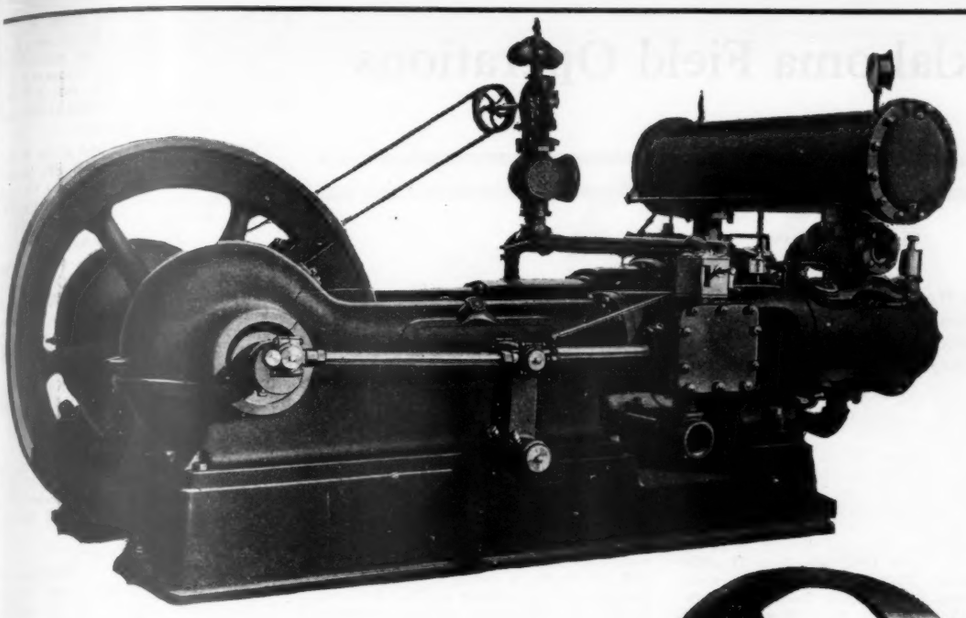
NEW YORK, Feb. 9.—A new micro-thermal furnace invented by Miss Taisia Stadnichenko, instructor in chemistry at Vassar College, will eliminate much waste in oil refining, according to Dr. Henry Noble MacCracken, president of Vassar. The National Research Council, he said, had granted Miss Stadnichenko $7,000 to continue her research in Washington.

The micro-thermal furnace, Doctor MacCracken said, makes possible an accurate observation of the successive stages in the disintegration of shale or petroleum when subjected to temperatures up to 600 degrees centigrade, enabling scientists to determine the exact nature of the by-products formed. Such an instrument has been declared by scientists to be impossible.

Miss Stadnichenko came to this country as a refugee from Russia a few years ago, and for three years has been a member of the Vassar faculty.

BUYS EXPOSITION GROUNDS

The board of directors of the International Petroleum Exposition and Congress, at a meeting Monday, decided to purchase the grounds in the east part of Tulsa where the exposition was held last year, from the Prairie Oil & Gas Co. for $175,000. The grounds comprise seven acres. The Prairie Oil & Gas Co. agreed to credit the Exposition management with $25,000 of the purchase price to pay for space in future expositions which the company will use at the rate of 1,000 square feet a year. The exposition management has announced the exposition this year will be held from October 1 to October 10 inclusive.



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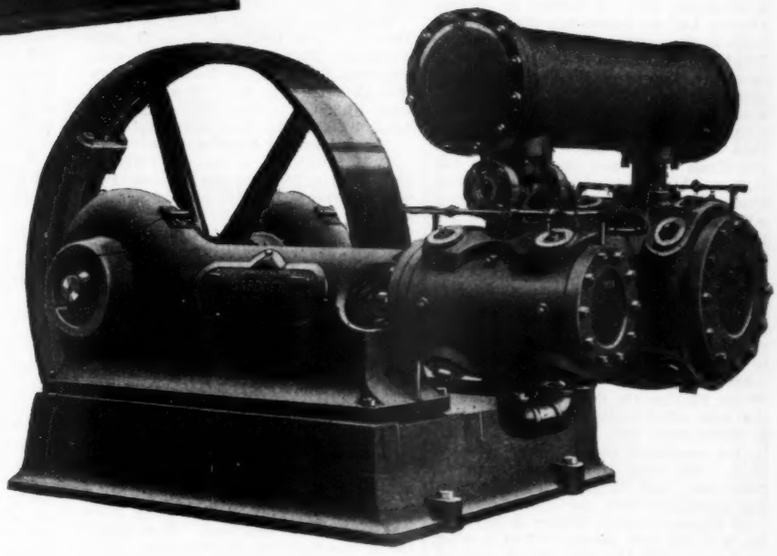

WORTHAM FIELD ADOPTS AIR LIFT

to maintain flow— Follows lead of California and Oklahoma

It was announced February 2nd that 11 of the leading operators in the Wortham Field had ordered 46 big air compressors with which to boost flow of wells as gas pressure declines. That these important producers are adopting air lift in "the field of the hour" has aroused the interest of every modern operator.

GARDNER 2-Stage Compressors are splendidly adapted for oil field air-lift work. Our 10 & 5 x 10 and 12 & 6 x 12, for 250 to 500 pounds pressures and up to 500 cu. ft. displacement, are in wide use throughout California and Mid-Continent fields. There is a GARDNER Compressor for every Oil Industry need. Let us send descriptive bulletins.

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GARDNER GOVERNORS PUMPS COMPRESSORS

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Oklahoma Field Operations

By C. D. Lockwood

Snowden & McSweeney's No. 1 King, in 14-10-8, separated from Cromwell Field by two dry holes, has oil showing. Hughes County wildcat making 4,000,000 feet of gas. Prairie Oil & Gas Co.'s new gasser in northeast Papoose Field burns down rig. Gypsy Co.'s new edge well making 800 bbls.

Most interesting in the past week's developments in the Oklahoma fields was the finding of oil in Section 14-10-8 in a well separated from the Cromwell Field, Seminole County, by two dry holes, although only a half mile east of a producing well. A wildcat in Hughes County had an interesting show of gas, while in the northeast end of the Papoose Field the Prairie Oil & Gas Co. brought in a gasser which caught fire and burned down the rig. The Gypsy Oil Co. had a new well in the northwest end of the Cromwell Field which was making more than 800 bbls. a day. The Amerada Petroleum Corp. and the Gilcrease Oil Co.'s northeast extension in the Papoose Pool made 135 bbls. an hour on Tuesday when drilled to a total depth of 3,368 feet, but declined to 1,850 bbls. on Saturday and was making 3 per cent b.s.

The well east of the Cromwell Field mentioned above is Snowden & McSweeney's No. 1 King, SW cor. NW NW, Section 14-10-8. There are a few producing wels in the southwest quarter of the section, which are at the extreme southeast end of the Cromwell Field. The Waite Phillips Co. drilled a dry hole in the west offset location to the Snowden & McSweeney well, and another duster in the southwest corner of the 40-acre tract. The new well topped sand at 3,528 feet, and, drilling at 3,574 feet, was making 10 bbls. per hour.

In Hughes County, Walton & Snyder's No. 1, C NE SW, Section 8-6-10, 8 miles southwest of Holdenville, found sand at 2,845 feet, and, drilling at 2,852 feet, was making 4,000,000 feet of gas.

The Gypsy Oil Co.'s No. 1 Sampson, C NE SE SE, Section 5-10-8, is a new edge well in the present producing zone of the Cromwell Field, and is a west offset to the Cosden Oil & Gas Co.'s No. 9 Keys, in Section 4. Sand was found at 3,395-3,429 feet, and during the first 24 hours produced 843 bbls.

The Amerada Petroleum Corp. and the Gilcrease Oil Co.'s No. 1 Harjo, SW cor. Section 36-10-9, which last week extended the Papoose Pool a quarter mile, topped sand at 3,349 feet, and when drilled to 3,368 feet was producing at the rate of 135 bbls. an hour. After 24 hours it was producing 90 bbls. an hour, and on Saturday afternoon was making 75 bbls. an hour, with 3 per cent b.s.

The Carter Oil Co.'s No. 11 Goltry, C SW SW SW, Section 35-25-1w, in the Tonkawa Field, Kay County, was dry in the Wilcox, and drilled down to 4,510 feet, where a sand was found with a show of oil. At one time there was 400 feet of oil in the hole, which was bailed, and the well drilled into water. At 4,554 feet it was drilling in lime with 2,000 feet of water in the hole.

The Prairie Oil & Gas Co.'s No. 3 Westbrook, NE cor. SE, Section 35-10-9, a half mile northwest of the Amerada Petroleum Corp.'s new producer in Section 26, topped sand at 3,336 feet, and at 3,341 feet was making 20,000,000 feet of gas, which caught fire and burned down the rig, injuring five men. Sunday afternoon, after burning 26 hours, it was shot out. A comparison of sand records with the Amerada Petroleum Corp.'s No. 1 Harjo, in the southwest corner of Section 36, is interesting in that the Prairie well encountered sand 32 feet higher, while the topography of the land is practically flat.

C. B. Tibbins' No. 6, SE cor. NE SW, Section 30-15-9, in Creek County, was making 130 bbls. an hour from sand at 2,998-3,010 feet, and later declined to 70 bbls. an hour.

Production as of February 5 in the Otoe Pool was 8,042 bbls. from 11 wells; Cromwell, 37,388 bbls. from 366 wells; Papoose, 38,290 bbls. from 101 wells; Stroud, 2,625 bbls. from 69 wells; Tonkawa, 91,800 bbls. from 752 wells; Burbank, 57,009 bbls. from 1,667 wells.

In the Papoose Pool

T. B. Slick's No. 3 Bruner, C SW NE NE, Section 2-9-9, in the Papoose Pool, was making 15,000,000 feet of gas and 350 bbls. of oil from sand at 3,308-20 feet. The same owner's No. 4 Bruner, C NE SE NW, Section 2-9-9, was making 35,000,000 feet of gas and 200 bbls. of oil with 10 per cent water. The Mutual Oil Co.'s No. 1 Carter, C SE NW NW, Section 4-9-9, was making 10 bbls. of oil an hour from sand at 3,356-62 feet. The Transcontinental Oil Co.'s No. 7, C NW NE NE, Section 4-9-9, topped sand at 3,274 feet, and at 3,317 feet was making 40,000,000 feet of gas and 30 bbls. of oil.

The Prairie Oil & Gas Co. was rigging up No. 3 Vincent, C SE SW SW, Section 34-10-9. The same company's No. 9 Vincent, C SE NE SW, Section 34-10-9, was drilling at 100 feet. T. B. Slick's No. 5 Bruner, C SE NW NW, Section 2-9-9, was drilling at 300 feet. The Cosden Oil & Gas Co.'s No. 9 Alexander, C SW NW NW, Section 3-9-9, was drilling at 700 feet. The Mutual Oil Co. was spudding in No. 3 Carter, C NE NW NW, Section 4-9-9. The Indian Territory Illuminating Oil Co. and the Barnsdall Refining Co.'s No. 7 Williams, C NE NE SE, Section 34-10-9, and No. 8 Williams, C NW NE SE, Section 34-10-9, were being rigged up. The Foster Investment Co. was rigging up No. 1, SW cor. SE NE, Section 33-10-9. The Carter Oil Co. was spudding in No. 6 Johnson, SW cor. SE, Section 33-10-9. The Jennings Petroleum Co. was rigging up No. 2 Barnett, C SE SE SW, Section 33-10-9. The Indian Territory Illuminating Oil Co. and the Barnsdall Refining Co. were rigging up No. 5, C SW NE SE, Section 34-10-9. The Phillips Petroleum Co. was spudding in No. 1 Bruner, C SW SE NE, Section 34-10-9, and was rigging up No. 2 Bruner, C SE SW NE, Section 34-10-9. The Prairie Oil & Gas Co.'s No. 2-A Vincent, C SW SE SW, Section 34-10-9, was drilling at 200 feet.

In the Cromwell Field

The Carter Oil Co.'s No. 1 Dunn, C SW SW NW, Section 3-10-8, in the Cromwell Field, was making 450 bbls. naturally from sand at 3,355-3,445 feet. The Roxana Petroleum Corp.'s No. 2 Yarhola, C SW NW SW, Section 3-10-8, was making 1,000 bbls. naturally from sand at 3,336-3,430 feet. The Cosden Oil & Gas Co.'s No. 12, C SE SW SW, Section 4-10-18, had 1,500 feet of oil in the hole from sand at 3,445-48 feet, and will make a small pumper. The Southwestern Petroleum Co.'s No. 5 Wisner, C NE SE NE, Seccion 4-10-8, topped sand at 3,386 feet, and at 3,415 feet was making 12,000,000 feet of gas and 12 bbls. of oil.

The Pure Oil Co. was drilling at 400 feet in No. 2 Jackson, C SW SE SW, Section 33-11-8. The Southwestern Petroleum Co. was spudding in No. 6-A Wisner, C NW SE NE, Section 4-10-8, a twin well to No. 6, which was lost at 2,830 feet. The Sinclair Oil & Gas Co.'s No. 2 Fixicio, C NE NE SE, Section 5-10-8, was drilling at 500 feet. The Devonian Oil Co.'s No. 1 Deer, C NW SW NE, Section 8-10-8, was drilling at 900 feet. The Carter Oil Co. was drilling at 200 feet in No. 4 Dunn, C SE SW NW, Section 3-10-8; rigging up No. 5 Dunn, C SW SE NW, same section; spudding in No. 6 Dunn, C NW NW NW; rigging up No. 7 Dunn. C SE SE NW; and had a rig up for No. 9 Dunn, C NW NE NW, Section 3-10-8. The Southwestern Petroleum Co. had a rig up for No. 1 Little, C NW NW SE, Section 3-10-8.

Rogers County

The Middletown Oil Co.'s No. 1 Benge, NW cor. NE SE, Section 30-22-14, Rogers County, was good for 50 bbls. after a 40-quart shot in sand at 1,262-83 feet.

Osage County

The Price Oil Co.'s No. 4, SE cor. Section 25-24-8, Osage County, was dry and abandoned at 2,585 feet. The Tidal-Osage Oil Co. abandoned No. 3 CWL SW, Section 26-24-9, without spudding. Alexander & Shakely's No. 2, NW cor. Section 31-24-9, was making 10 bbls. from the Bartlesville sand at 2,140 feet after a 40-quart shot.

Pawnee County

The Josey Oil Co.'s No. 2 Scott, NW cor. Section 22-20-6, in Pawnee County, was deepened to 3,100 feet, where it was good for 8,000,000 feet of gas. The Cosden Oil & Gas Co.'s No. 9 School land, NW cor. SW, Section 16-20-7, found sand at 2,644-63 feet, and was good for 100 bbls, after a 10-quart shot. The Magnolia Petroleum Co.'s No. 4 Diamond, C NE NW NW, Section 4-22-3, was making 1,660 bbls. naturally from sand at 4,066-4,106 feet.

The Prairie Oil & Gas Co.'s No. 5 Donahoe, SW cor. Section 15-20-6, was drilling at 2,780 feet. The Magnolia Petroleum Co. was rigging up No. 2 Rimmer, NE cor. SW, Section 16-20-6. Haley, Pulse & Garber's No. 1 Beck, C NE NE SW, Section 5-23-5, was drilling at 500 feet. Crow and others were spudding in No. 1, C NE SE NE, Section 10-23-5. The Tidal Oil Co. was building a rig for No. 1, C SW SW SE, Section 15-23-4. Donahoe and others were rigging up No. 7 Zoldoslie, C SE NW SE, Section 22-23-4, and had a rig on the ground for No. 8, C SW NW SE, Section 22-23-4. The Cosden Oil & Gas Co. had a rig on the ground for No. 1, C SW NW SW, Section 23-23-4. The Watchorn Oil & Gas Co. was deepening No. 4 Diamond, C NW NW NW, Section 4-22-3, and had a show of oil at 4,100-06 feet.

Tonkawa Field

The Comar Oil Co.'s No. 18-W Clements, SW cor. NE NW, Section 34-25-1w, in the Tonkawa Field, was completed with sand at 4,141-76 feet, making 1,629 bbls.; No. 8-W Blubaugh, NE cor. SW, Section 2-24-1w, sand at 4,097-4,183 feet, making 2,335 bbls.; No. 12-W Blubaugh, NW cor. NE SE, Section 2-24-1w, sand at 4,173-4,220 feet, making 2,849 bbls.; No. 12-W Ellsworth, SE cor. SW NE, Section 2-24-1w, at 4,033-53 feet, making 1,172 bbls.

The Texas Co. had a rig up for No. 4 Davis, SE cor. SW SW, Section 27-25-1w, and was rigging up No. 8 Gilbert, SW cor. SE SW, Section 27-25-1w. The Comar Oil Co.'s No. 22-W Clements, C N half NW, Section 34-25-1w, was drilling at 600 feet. The same company's No. 11-W C. Blubaugh, NW cor. SW SE, Section 2-24-1w, was drilling at 800 feet.

Kay County

The Cortez Oil Co. had a rig up for No. 1 Hardy, SE cor. NE SE, Section 1-28-3. The Harold Petroleum Co. had a rig on the ground for No. 1 Kelly, SW cor. SE, Section 4-27-1w.

Payne County

The Josey Oil Co.'s No. 4 Ellis, NW cor. Section 1-18-5, Payne County, was completed with sand at 1,308-23 feet, and making 14,000,000 feet of gas. The same company's No. 3 Bushee, NE cor. NW, Section 2-18-16, was making 5,000,000 feet of gas from sand at 2,909-29 feet.

The O'Kansas Oil Co.'s No. 1 Blue, SE cor. SW SE, Section 7-18-5, was drilling at 500 feet.

Noble County

The Wentz Oil Corp. was rigging up No. 1, C SE NE NW, Section 27-22-1, Noble County. The Belt Petroleum Co. was spudding in No. 1, C SE SE SE, Section 29-21-1.

Tulsa County

A. W. Anthony's No. 3 Wetstone, SE cor. SW, Section 3-16-12, was shut in for 20,000,000 feet of gas in sand at 1,658-1,715 feet. The A. B. Ice Co. and others' No. 1, CWL SW NE SW, Section 8-16-12, was making 25 bbls. naturally from sand at 2,060-2,115 feet. Soppese and others' No. 5 Marshall, NW cor. NE NW SW, Section 8-16-12, was dry and abandoned at 2,567 feet. Thompson & Black's No. 1 Grayson, NW cor. NE, Section 10-16-12, was shut in for 14,500,000 feet of gas in sand at 1,670-34 feet. The same company's No. 2 Vann, C NE NW, Section 10-16-12, was drilled to 2,496 feet, and plugged back to 1,700 feet and shut in for 3,000,000 feet of gas in sand at 1,651-1,702 feet.

Medlin & White's No. 1 Collins, SW cor. SE NE, Section 13-21-13, was drilling at 1,425 feet.

Wagoner County

William McDougal was rigging up a machine for No. 1 Dan, SE cor. NW NW, Section 21-17-15, in Wagoner County.

Washington County

The Canary Oil Co.'s No. 1 Canary, NE cor. NW NW, Section 18-29-14, in Washington County, was dry and abandoned at 1,880 feet. The Link Oil Co.'s No. 1, C NE NE SW, Section 17-26-13, was dry at 1,805 feet.

Nowata County

Ludowick and others' No. 1, CNL SE SW, Section 16-28-16, in Nowata County, was making 40 bbls. with some water from sand at 1,243-43 feet.

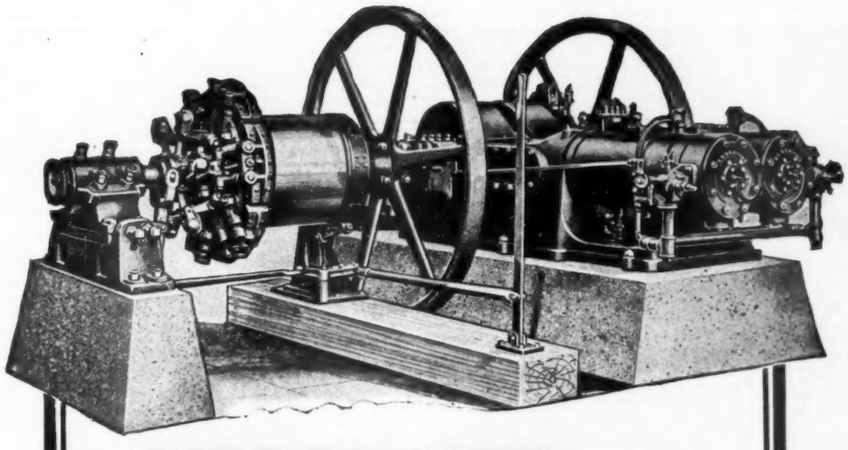
Craig County

The Shaffer Oil & Refining Co. was spudding in No. 1 Duncan, C SE SW SE, Section 19-29-19, Craig County.

Burbank Completions

Completions in the Burbank Field include The Texas Co.'s No. 3 Wood, CSL SE SW NW, Section 18-27-6, 215 bbls. after 135-quart shot at 2,918-65 feet. Cosden Oil & Gas Co.'s No. 6, CSL SE SW SE, Section 17-26-6, 105 bbls. first 19 hours after 110 quarts at 2,895-2,965 feet.

New and drilling wells include Carter Oil Co.'s No. 1, NE cor. Section 20-26-6, drilling at 250 feet; same company's No. 2, CNL NW NE NE, Section 20-26-6, drilling at 180 feet; Lewis Oil Co.'s No. 1, NW cor. NE, Section 21-26-6, drilling at 230 feet; Carter Oil Co.'s No. 1, NW cor. Section 21-26-6, drilling at 255 feet; same company's No. 2, CNL NE NW NW, Section 21-26-6, spudding in; Skelly Oil Co.'s No. 1, SW cor. Section 2-27-5, spudding in; Phillips Petroleum Co.'s No. 2, CSL SE SW NE, Section 11-27-5, building rig; No. 3, CSL SW SE NE, Section 11-27-5, building rig; No. 4, SE cor. SE NE, Section 11-27-5, rig up; No. 6, C NE SW NE, Section 11-27-5, building rig; No. 8, CEL NE SE NE, Section 11-27-5, spudding in; No. 11, C SW NE NE, Section 11-27-5, rig on ground; No. 12, CEL SE NE NE, Section 11-27-5, drilling at 1,000 feet; No.



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The Bessemer 45 is a special twin cylinder 45 H. P. Bessemer Gas Engine with enclosed crank case, adjustable bearings, cross head construction, magneto ignition and with the Bessemer standard of quality built into every ounce.

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The Bessemer 45 is easily transported; is speedy and reliable in action; and economical in upkeep. It is already popular with the drilling crews who have used it, and will soon be the favorite in all fields.

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14, CNL NW NE, Section 11-27-5, drilling at 955 feet.

Creek County

The Texas Co.'s No. 1 Samuels, CWL NW SW, Section 8-18-9, Creek County, had a hole full of oil from sand at 2,510-39 feet, and was making ready to swab. The same company's No. 2 Samuels, SE cor. SW SW, Section 8-18-9, was making 50 bbls. naturally from sand at 2,587-2,602 feet. T. Cushing and others' No. 1, CEL SW NE, Section 11-17-8, drilled to 2,775 feet, was plugged back to 2,680 feet and shot with 90 quarts in sand at 2,635-55 feet, and was swabbing 30 bbls. The Atlantic Oil Producing Co.'s No. 2 Johnson, SW cor. SE, Section 14-17-8, had 400 feet of oil in the hole from sand at 2,286-2,326 feet. D. B. Mason and the Phillips Petroleum Co.'s No. 1 Fife, NE cor. NW SE, Section 24-17-8, was making 5,000,000 feet of gas from sand at 2,717-22 feet, with the bottom still in sand. The Olean Petroleum Co.'s No. 2 Washington, NW cor. SW, Section 32-17-8, made 50 bbls. naturally and 776 bbls. after a 120-quart shot in sand at 3,498-3,526 feet. The same company's No. 7 Washington, NW cor. SW SW, Section 32-17-8, was making 142 bbls. naturally from sand at 3,482-3,517 feet. The Gray Oil Co.'s No. 1 Stewart, SE cor. SW SW, Section 32-17-12, was dry at 2,432 feet.

C. F. Noble's No. 1 Lewis, SW cor. NE SW, Section 7-14-7, was making 47 bbls. after two shots of 65 and 30 quarts from sand at 4,065-4,155 feet. The Pulaski Oil Co.'s No. 1 Jack, SW cor. NE NW, Section 7-14-7, was good for 30 bbls. after a 20-quart shot in sand at 4,100-44 feet. The Pure Oil Co.'s No. 2 Stover, CWL SW NE SW, Section 7-14-7, had 700 feet of oil in the hole from sand at 4,069-4,130 feet. F. R. Billingslea and the Skelly Oil Co.'s No. 2 Fields, NW cor. SW SE, Section 30-15-9, was making 670 bbls. with 3 per cent b.s. from sand at 4,021-28 feet. The same owners' No. 1 Fields, NE cor. SE SW, Section 30-15-9, was making 105 bbls. from sand at 3,023-38 feet. C. G. Tibbins' No. 3, SW cor. NW SE, Section 30-15-9, was making 1,800 bbls. from sand at 3,015-23 feet. F. R. Billingslea and the Skelly Oil Co.'s No. 1 Lucas, NW cor. NE NE, Section 31-15-9, was dry and abandoned at 3,683 feet. The Phillips Petroleum Co.'s No. 1, CSL SW SE SE, Section 13-14-9, had a show of oil and gas in sand at 3,508-17 feet. The Cosden Oil & Gas Co.'s No. 1 Harry, NW cor. NE NW, Section 4-14-10, was spudded in and shut down. H. C. Wilson's No. 1 Strip, SE cor. SE NW, Section 4-14-10, had a show of oil in sand at 3,194-3,201 feet. The H. F. Wilcox Oil & Gas Co.'s No. 1 Scott, NE cor. SE NE, Section 20-14-10, was making 100 bbls. naturally from sand at 3,335-59 feet. The same company's No. 3 Scott, C SW NW NE, Section 20-14-10, was making 9,000,000 feet of gas from sand at 2,297-2,321 feet.

Other Operations

The Riverside Oil Co.'s No. 3 Bell, NE cor. SW SW, Section 19-17-9, was spudding in. The Pure Oil Co. had a rig up for No. 2 Washington, NW cor. NE SW, Section 32-17-8. The Olean Petroleum Co. had a rig up for No. 4 Wills, NW cor. NE NE, Section 6-16-8. The Gray Oil Co.'s No. 1 Stewart, SE cor. Section 32-17-12, was dry and abandoned at 2,432 feet. The Phillips Petroleum Co. had a rig up for No. 19 Tiger, NE cor. NW SW, Section 4-15-9. F. Billingslea and the Skelly Oil Co. had rigs up for No. 3 Fields, CNL SW SE, Section 30-15-9, and No. 2 Fields, CNL SE SW, Section 30-15-9. C. G Tibbins' No. 6, CEL NW SE, Section 30-15-9, was drilling at 950 feet. The Buck Oil Co.'s No. 1 Robinson, SE cor. SW NW, Section 32-15-10, was drilling at 950 feet. The Skelly Oil Co.'s No. 1 Davis, SE cor. Section 21-14-9, was spudding in. C. G. Tibbins had a rig on the ground for No. 1 Coon, NE cor. SE NE, Section 23-14-9. The Phillips Petroleum Co. had a rig up for No. 2 McIntosh, NW cor. SE NE, Section 24-14-9, and was building a rig for No. 2 Penn, NE cor. SE NW, Section 24-14-9. The Devonian Oil Co.'s No. 1 Durant, NW cor. SW NW, Section 27-14-9, was drilling at 1,425 feet. F. R. Billingslea was rigging up No. 2 Micco, SE cor. NE NE, Section 28-14-9. The Jomac Oil Co. was spudding in No. 1 Harry, NE cor. SW, Section 4-14-10. Tom Kelly was skidding the rig on No. 3, SW cor. NE, Section 4-14-10; the old hole was 2,400 feet deep. The same owner was spudding in No. 1 Harry, NW cor. NE SE, Section 4-14-10. Quinlan & Henry's No. 1 Daniel, C NE SE NW, Section 20-14-10, was drilling at 946 feet. T. B. Slick's No. 1 Scott, CEL NW NW NE, Section 20-14-10. The H. F. Wilcox Oil & Gas Co.'s No. 6 Scott, C SW NE NE, Section 20-14-10, was drilling at 250 feet.

Lincoln County

The Cosden Oil & Gas Co. has a rig up for No. 1, SW cor. Section 13-15-6, in Lincoln County. The Twin State Oil Co. was rigging up No. 1, C SW NW NW, Section 2-14-5. The Magnolia Petroleum Co. was building a rig for No. 2, SW cor. NE, Section 3-14-5. Baily & Prowant had a rig up for No. 1, NE cor. SE, Section 36-17-4.

Okmulgee County

R. N. Bise's No. 1 Grayson, CNL SE NE, Section 3-15-11, Okmulgee County, found sand at 1,817-34 feet, and was good for 20 bbls. after an 80-quart shot. Shelton & Houston's No. 1 Graham, NE cor. Section 22-15-11, was dry and abandoned at 2,865 feet. The Preston Oil Co.'s No. 1 Sneed, SE cor. SW SW, Section 4-14-13, was dry and abandoned at 2,700 feet. The Anglo-Tex Oil Co.'s No. 2 Grayson, NW cor. SW NE, Section 33-12-11, was abandoned at 3,710 feet. The same company's No. 1 Skelton, SW cor. SE SE, Section 33-12-11, was making 10,000,000 feet of gas from sand at 2,756-62 feet. The Josey Oil Co.'s No. 3 McCoy, SW cor. NE SW, Section 33-12-11, was making 5,000,000 feet of gas from sand topped at 3,040 feet. Calvin Smith's No. 5 Sullivan, NE cor. SE SE, Section 5-12-12, was abandoned at 3,231 feet. The Morton Oil Co.'s No. 2 Fisher, NW cor. SE NW, Section 7-12-12, was making 10 bbls. an hour from sand at 2,600-02 feet.

The Central National Petroleum Co.'s No. 3 Barnett, CNL NW SE, Section 34-16-12, was making 37 bbls. per hour from sand at 2,135-47 feet. Meadows & O'Brien's No. 1 Morey, SW cor. NW NE, Section 34-16-12, was making 25 bbls. of oil and 10,000,000 feet of gas from sand at 2,159-88 feet. Sheldon & Houston's No. 1 Vore, NE cor. SW, Section 34-16-12, was making 50 bbls. from sand at 2,177-92 feet after a 30-quart shot in sand at 2,177-92 feet. The Superior Oil Corp. and others' No. 2 Vore, SE cor. NW, Section 34-16-12, was making 75 bbls. from sand at 2,160-79 feet. E. B. Grabbs' No. 6 Owens, SE cor. NW SW, Section 22-15-14, was making 50 bbls. after a shot at 1,630-14 feet. The Utah Oil Co.'s No. 4 Scott, CSL SE NE, Section 15-13-14, topped a sand at 1,905 feet, and had 1,200 feet of oil in the hole.

The Eastern Oil Co.'s No. 8 Berry, NE cor. SW, Section 25-13-11, was drilling at 925 feet. The Waite Phillips Co.'s No. 1 Kanard, SW cor. NW, Section 33-13-12, was drilling at 300 feet. The Josey Oil Co.'s No. 5 McCoy, NW cor. SW, Section 33-12-11, was drilling at 1,070 feet.

Muskogee County

Delaney and others' No. 1, SE cor. NW, Section 35-15-16, was completed with sand at 1,720-35 feet, making 500,000,000 feet of gas. E. A. Hutchinson's No. 1 Lee, SE cor. SW SE NW, Section 35-15-16, was making 6,000,000 feet of gas from sand at 1,705-27 feet.

Okfuskee County

The Atlantic Oil Producing Co.'s No. 1 Gray, NW cor. SW SE, Section 36-12-10, Okfuskee County, was making 720 bbls. naturally from sand at 3,009-40 feet. The Tidal Oil Co.'s No. 1, NW cor. SW SW, Section 2-11-11, was making 1,000,000 feet of gas from sand at 2,271-83 feet. The Windsor Oil Co.'s No. 3 Holmes, SW cor. NE, Section 22-11-11, was making 2,000,000 feet of gas from sand topped at 2,570 feet. Clark & Kim's No. 1 Harjo, NW cor. SW SE, Section 27-11-11, was abandoned at 2,995 feet.

Burton & Pratt's No. 1 Summers, NW cor. SE, Section 9-12-10, was drilling at 600 feet. The Independent Oil & Gas Co. was spudding in No. 1 Scott, SW cor. SE SW, Section 33-13-7. Dalton & Baker were building a rig for No. 1 Harjo, SE cor. Section 16-13-8. The Amerada Petroleum Corp.'s No. 1 Yarhola, C NW NW NE, Section 12-11-7, was drilling at 550 feet. The Gladys Belle Oil Co.'s No. 8, Section 13-11-11, had the 5-inch casing set at 2,830 feet; this is an old well being deepened. N. Baltimore and others' No. 1 Taylor, NW cor. NE NW, Section 14-11-11, was drilling at 985 feet. The Riverland Oil Co. was building a rig for No. 2 Holmes, SE cor. SW NE, Section 30-11-11. The Superior Oil Corp. and others had a rig up for No. 1 Buch, C SW SW SE, Section 20-9-10. The Kingwood Oil Co.'s No. 1, C NW NW NW, Section 29-9-10, was drilling at 460 feet.

Seminole County

The Magnolia Petroleum Co. was building a rig for No. 1 Kelly, C SW SW NE, Section 12-8-7, Seminole County. W. R. Ramsey was spudding in No. 2 McGersey, C SE SW SW, Section 19-8-8, and was rigging up No. 2 Bowlegs, C SE SW NW, Section 31-8-8.

Pottawatomie County

The Texas Co. was building a rig for No. 1 McNab, SE cor. SW, Section 3-11-6, Pottawatomie County.

Hughes County

The Mid-Kansas Oil & Gas Co.'s No. 2 Byrd, C SE NE SE, Section 4-9-11, Hughes County, was making 100 bbls. from sand at 2,924-28 feet. The same company's No. 1, C NE SW NW, Section 9-9-11, was dry at 3,069 feet.

The Kingwood Oil Co. and the Empire Gas & Fuel Co.'s No. 1 Simon, C NE SE SE, Section 24-9-8, was drilling at 1,100 feet. The Waite Phillips Co. had a rig on the ground for No. 1, C NW NE SE, Section 35-8-8. Johnson & Ash were building a rig for No. 2 Jefferson, C NE NE SW, Section 35-8-8. E. P. Hawkins' No. 1, NE cor. NW, Section 23-9-10, was drilling at 1,600 feet. The Tidal-Osage Oil Co. was rigging up No. 1 Autry, C NW SE SW, Section 3-9-11.

Stephens County

The Knox Petroleum Co.'s No. 3 Pettigrew, NW cor. SE NW, Section 22-5w, Stephens County, was completed with sand at 1,252-60 feet, and was making 12 bbls. naturally. Winkler and others' No. 2 Springer, SE cor. NW SE NW, Section 28-1s-8w, was completed for 20 bbls. naturally from sand at 1,694-1,708 feet. The Lone Star Gas Co.'s No. 4 Clarkson, SE cor. SW NW, Section 30-1s-8w, was good for 85 bbls. naturally from sand at 2,206-48 feet.

The Carter Oil Co. was moving in tools to deepen No. 6 Ridge, CEL SW NW, Section 30-1-8w. The Lone Star Gas Co. was rigging up No. 1-A, SW cor. SE SW, Section 17-1s-8w. Crumm & Beard were rigging up rotary tools for No. 1 Warner, NE cor. Section 22-1s-8w. Kelly and others' No. 1 Warner, SW cor. NW NE, Section 22-1s-8w, was drilling at 800 feet. The Lone Star Gas Co.'s No. 5 Clarkson, C SW NW, Section 30-1s-8w, was drilling at 150 feet. The Magnolia Petroleum Co.'s No. 1 Turner, NE cor. Section 14-2s-8w, was drilling at 250 feet.

Garvin County

The Magnolia Petroleum Co.'s No. 4 Jones, NW cor. SE, Section 14-1-3w, had a show of oil and gas in sand at 1,343-62 feet, and was drilling at 1,375 feet.

The Magnolia Petroleum Co.'s No. 1, SE cor. NE SW, Section 11-1-3w, was dry and abandoned at 2,430 feet. The Tidal-Osage Oil Co.'s No. 1 Thomas, NW cor. Section 8-1-2w, was dry and abandoned at 2,982 feet.

Jefferson County

The Carter Oil Co.'s No. 2 Seay, NE cor. SW SW, Section 34-6s-5w, was spudding in.

Carter County

The Amerada Petroleum Corp.'s No. 1 Fish, NE cor. NW SE, Section 28-5s-1, Carter County, was making 36 bbls. from sand at 1,113-24 feet. Westheimer & Daube's No. 1 fee, CEL NE NE NW, Section 28-5s-1, was good for 20 bbls. from sand at 901-11 feet. The Paige Syndicate's No. 4 McClure, C NE SE NW, Section 27-2s-3w, was making 40

(Continued on Page 106)

Kansas Oil Field News

By C. D. Lockwood

The Rainbow Bend Field, in Cowley County, was extended a half mile when the Waite Phillips Co.'s No. 1 Nelson, SW cor. Section 21-33-3, came in for 105 bbls. an hour from sand at 3,229-64 feet. This is the first well in Section 21, and is a half mile east of the nearest producing well. The Waite Phillips Co.'s No. 1 Patterson, in Section 18, topped sand at 3,240 feet, and at 2 feet in had nothing showing. This well is a half mile northwest of production.

Roth and others' No. 1, NW cor. NE, Section 4-30-8, in Cowley County, was shot with 140 quarts in sand at 2,100-31 feet, and made an estimated production of 500 bbls.

E. B. Merriam's No. 1 Landon, SE cor. Section 14-25-1, Sedgwick County, found the Wilcox dry at 5,282-86 feet.

George Gano's No. 1 O'Halloran, NW cor. SE NW, Section 28-25-6w, Reno County, had a show of oil and gas in sand topped at 3,612 feet and was setting the liner to test.

E. B. Shawver's No. 1 Brainard, NE cor. Section 3-25-3, southwest of the Potwin Field, in Butler County, had 1,700 feet of 44.8 gravity oil in the hole from sand at 2,718-25 feet.

McNab & Burt's No. 1 Stubbs, SW cor. SE, Section 8-30-2, in Sumner County, had a show of oil and gas in sand at 3,157-80 feet, and was underreaming.

The Derby Oil Co.'s No. 1, NW cor. SW SE, in Russell County, had a shot of gas in sand at 2,200 feet, and was drilling in.

The Hull Oil Co.'s No. 1, SW cor. NW NE, Section 24-32-4, in the Winfield Pool, Cowley County, had a hole full of oil and was to have been shot at 3,000-38 feet.

Completions in Kansas for the week ended January 31 numbered 13, of which 9 were oil wells, with 1 gas well. The initial production of completed wells was 2,625 bbls. Locations staked numbered 59, while there were 78 new rigs up.

Cowley County

The Lewis Oil Co.'s No. 4 Elliott, SE cor. NW SE, Section 31-30-6, Cowley County, was making 90 bbls. naturally from sand at 2,865-2,906 feet. The Trees Oil Co.'s No. 1 Sherwood, C NW NW NW Section 14-31-4, was dry and abandoned at 3,511 feet. T. B. Slick's No. 1 Conrad, C SE SE NW, Section 19-32-3, which had only a show of oil in sand at 2,744-55 feet, was straightreaming at 2,770 feet. The south offset to this well, T. B. Slick's No. 1 Waite, has shut down at 2,614 feet with a hole full of oil to erect tankage. The Waite Phillips Co.'s No. 1 Johnson, C NE NE SE, Section 9-33-3, was completed with sand at 3,508-17 feet, making 446 bbls. naturally. The Marland Oil Co.'s No. 1 Bower, C SW SW NW, Section 10-35-3, was swabbing 586 bbls. from sand at 3,501-08 feet. The Roxana Petroleum Corp.'s No. 1 Spruens, C NW NW SW, Section 10-33-3, was swabbing 639 bbls. from sand at 3,515-21 feet. The Waite Phillips Co.'s No. 7 Wertman, C NW NW NE, Section 20-33-3, was making 650 bbls. daily from sand at 3,180-3,209 feet. The same company's No. 5 Johnson, C SW SW SE, Section 20-33-3, was completed with sand at 3,214-51 feet, total depth 3,253 feet, making 2,875 bbls.

The Marland Oil Co. was rigging up No. 4 Bower, C NE SW NW, Section 10-33-3. The Roxana Petroleum Corp. was spudding in No. 3 Spruens, C NE NW SW, Section 10-33-3. The Waite Phillips Co. was rigging up No. 1, C SE SE NE, Section 19-33-3, No. 1 Nelson, C NE NE SE, Section 19-33-3, No. 3

(Continued on Page 104)

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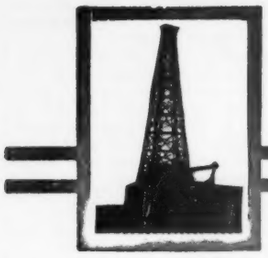

North-Central Texas Field

By Staff Correspondent

American Refining Co.'s No. 2 Burnett estate, Panhandle, now making 600 bbls.; No. 3 spraying 100 bbls. Roxana Petroleum Corp.'s No. 2 Kunkel, Archer County, completed for 900 bbls. White and others' No. 1 Kunkel reported gauging 1,060 bbls., and Harvey and others' No. 1 Kunkel, 1,475 bbls.

FORT WORTH, Tex., Feb. 9.—With unusually favorable weather prevailing over the whole of the North Central Texas territory the week just closed has been a rather eventful one. It has been a week remarkable for intense activity, not only in the proven fields but in the wildcat districts as well and activity has been particularly marked in the districts where production is most prolific, as in southern Archer County. The week has also been remarkable for a more than ordinary number of large wells, several wells of almost gusher proportions having been brought in in the shallow belt of south Archer County.

Early in the week a great deal of interest was attached to the bringing in of a big well in the Panhandle by the American Refining Co., the No. 2 Burnett Estate, which came in flowing close to 100 bbls. an hour. The production came in from 8 feet of pay which was topped at 2,970 feet, the pay formation being the usual wash from which all the Panhandle production is coming. The well has no particular significance in extending the producing area as it is practically in the heart of production. The well is on the 6666 Burnett Ranch in northern Carson County and practically offsets production of The Texas Co. on the same ranch.

The performance of the well has been rather disappointing over the whole of the week. Production has gradually declined until late in the week the gauge was said to show a daily output of only about 600 bbls. The same company's No. 3 Burnett also located in this same field is showing some oil. According to late reports it was spraying 100 bbls. daily from the pay at 2,846 feet while drillers were running the casing and setting a packer.

Large Producers in Archer

Archer County had a very active week. There were not only a large number of completions in the county during the week but some of the largest, if not actually the largest, producers that have ever been brought in in the county were recorded this week. Among the largest wells recorded in the county during the week, though some are not yet listed as completions, are on the Kunkel leases in the Carey district. The Roxana Petroleum Corp.'s No. 2 Kunkel is a completion making about 900 bbls. daily and there are two wells on the Kunkel not yet completed, both much larger than the Roxana's No. 2. They are White and others' No. 1 Kunkel, which is reported to be gauging 1,060 bbls. from the sand at 1,133 to 1,156 feet and Harvey and others' No. 1 Kunkel, which is making an estimated 1,475 bbls. from the sand at 1,128 to 1,159 feet.

There are several other wells in the South Archer district nearing completion but which are showing for only about the usual amount of production for this shallow sand district. Wolfe and others' No. 1 Chilson is estimated to be making 100 bbls. daily from the sand at 1,808 feet. Christie Brothers' No. 1 Campbell is reported showing for a splendid producer. It is swabbing at the rate of about 420 bbls. from sand at 1,290 to 1,297 feet.

There are two good producers showing up on the Hausler lease and two on the Griffin lease. Shaw and others' No. 3 Hausler is showing for 350 bbls. a day from 15 feet in the sand topped at 1,134 feet. Ray and others' No. 13 Hausler is showing for an estimated 175 bbls. daily in sand at 1,138 to 1,149 feet.

Murchison and others have two good looking producers on the Griffin lease that are not yet completed. They are No. 12 Griffin which is making oil at the rate of 100 bbls. from sand at 1,289 to 1,307 feet and No. 13 Griffin which is making 150 bbls. from the sand at 1,238 to 1,311 feet.

Northern Young County

Two northern Young County wells that were reported a week ago to have all the earmarks of being producers are now making oil in fair quantities though not completed. They are both on the Gambrell lease 5 miles northwest of the town of Olney. The Texhoma Oil & Refining Co.'s No. 1 Gambrell is making 150 bbls. in sand at 1,215 to 1,224 feet. The Texas Co. is in the sand at 1,189 to 1,219 feet and is reported making oil at the rate of 325 bbls.

Stephen County reports one uncompleted well showing for a small producer. It is Thompson and others' No. 2 Williams, which is swabbing about 60 bbls. of oil at 2,104 to 2,175 feet.

In the South Vernon district of Wilbarger County, which was a little short on completions during the week there are several producers that should materially add to the completion list there next week. Bridwell and others' No. 6 Stephens is 1½ feet in the pay topped at 2,265 feet and is making about 100 bbls. of oil and 8,000,000 to 10,000,000 feet of gas. The well, it is reported, will probably be drilled deeper.

On the Castlebury lease the Humble Oil & Refining Co. has two good wells. No. 2 on this lease is flowing by heads and reported making an estimated 300 bbls. daily. Sand is at 1,293 to 1,314 feet. The same company's No. 5 Castlebury is in the sand at 1,303 to 1,318 feet and is also making an estimated 300 bbls. daily.

McCamey and others' No. 2 Richardson also in the south Vernon Field is pumping and flowing at the rate of 225 bbls. daily. The sand is at 1,300 to 1,330 feet.

In Wichita County the Magnolia Petroleum Co. has the promise of a small producer in its No. 66 Honaker. The well is reported good for about 15 bbls. at 1,457 to 1,458 feet.

Gain in Production

Production this week shows a nice gain over the previous week. Every district in the field with the single exception of Eastland County shows a substantial gain in average daily pipe line runs. Total production for this week is 129,200 bbls. daily compared with daily runs a week ago of 127,045 bbls. This leaves a gain for the week of 2,155 bbls.

The Iowa Park district showed a very handsome gain in production over the previous week, the increase being 1,480 bbls. in daily average. The Burkburnett Field showed a gain during the week of 505 bbls. Electra showed an increase of 80 bbls. Stephens County showed a gain of 85 bbls. and the wildcat districts showed a daily increase of 130 bbls. The loss in Eastland County amounted to 125 bbls.

Completions this week more than doubled the previous week's total. There were a total of 67 this week as compared with 30 for last week. Of this week's completions 35 were oil producers and 32 were dry holes. There were no gas wells. New production for the week amounted to 6,390 bbls. This is an average per new well of 198 bbls. This average was brought up largely through the completion of a big well in Reagan County by the Big Lake Oil Co. New production last week amounted to 1,835 bbls. from 16 producing oil wells.

Of this week's completions 32 were in Archer County, again nearly half the total completions for the week being accounted for by this very active territory. Of the 32 completions in Archer, 18 were producers and 14 were dry holes. The 18 new producers accounted for 3,105 bbls. of new production or an average per well of a little more than 172 bbls. This week Young County ranked second in the number of completions with a total of 11. Five of these were oil wells and six were dry holes. New production in the county amounted to 635 bbls.

Wichita County accounted for only five completions during the week, four of which were oil wells with new production amounting to 70 bbls. Stephens County had six new completions, four of which were producers with new production amounting to 595 bbls. Eastland County accounted for only three completions, two of which were oil wells and one a dry hole. The two oil wells had new production aggregating 260 bbls. The wildcat districts had a total of 10 completions, eight of which were dry holes. The two producers in the wildcat areas had new production amounting to 1,725 bbls. a day.

PRODUCTION REPORT

Week Ending February 5, 1925

Burkburnett	
Barkley & Meadows	555
Humble Oil & Ref. Co.	460
Gulf Production Co.	675
Magnolia Petroleum Co.	2,905
Sun Oil Co.	185
Panhandle Refining Co.	300
Prairie Oil & Gas Co.	30
Sinclair Oil & Gas Co.	65
The Texas Co.	510
Texhoma Oil & Ref. Co.	400
Miscellaneous	8,715
Total	14,800
Electra	
Empire Gas & Fuel Co.	1,050
Humble Oil & Ref. Co.	135
Gulf Production Co.	945
Magnolia Petroleum Co.	4,090
Panhandle Refining Co.	75
The Texas Co.	3,700
Texhoma Oil & Ref. Co.	1,720
Miscellaneous	5,785
Total	17,500
Iowa Park, Etc.	
Gulf Production Co.	35
Humble Oil & Refining Co.	10
Magnolia Petroleum Co.	420
Panhandle Refining Co.	55
Texhoma Oil & Ref. Co.	35
Miscellaneous	3,120
Archer County	
Empire Gas & Fuel Co.	630
Sun Oil Co.	245
Gulf Production Co.	2,740
Humble Oil & Ref. Co.	280
Magnolia Petroleum Co.	765
Panhandle Refining Co.	240
Prairie Oil & Gas Co.	810
The Texas Co.	2,795
Texhoma Oil & Ref. Co.	2,505
Miscellaneous	26,165
Petrolia—	
Gulf Production Co.	45
Magnolia Petroleum Co.	20
The Texas Co.	60
Miscellaneous	235
Total	41,210
Stephens County	
Empire Gas & Fuel Co.	55
Gulf Production Co.	1,280
Humble Oil & Ref. Co.	940
Magnolia Petroleum Co.	710
Mid-Kansas Oil & Gas Co.	1,995
Prairie Oil & Gas Co.	960
Sinclair Oil Co.	110
The Sun Co.	240
The Texas Co.	1,705
Texas Pacific Coal & Oil Co.	910
Miscellaneous	7,085
Total	15,990
Eastland County	
Gulf Production Co.	360
Humble Oil & Ref. Co.	65
Magnolia Petroleum Co.	690
Mid-Kansas Oil & Gas Co.	180
Panhandle Refining Co.	300
Prairie Oil & Gas Co.	570
Sinclair Oil & Gas Co.	385
The Texas Co.	260
Texas Pacific Coal & Oil Co.	870
Miscellaneous	2,945
Total	6,625
Other Fields	
Strawn—	
Texas Pacific Coal & Oil Co.	240
Miscellaneous	470
Moran—	
Empire Gas & Fuel Co.	40
Humble Oil & Ref. Co.	275
The Texas Co.	135
Texhoma Oil & Ref. Co.	145
Miscellaneous	1,790
Coleman County—	
Miscellaneous	65
Brown County—	
Miscellaneous	815
Comanche-Eastland—	
Humble Oil & Ref. Co.	200
Magnolia Petroleum Co.	1,225
Mid-Kansas Oil & Gas Co.	230
Sinclair Oil & Gas Co.	35
The Texas Co.	170
Texas Pacific Coal & Oil Co.	135
Miscellaneous	1,930
Young County	
Gulf Production Co.	90
Sinclair Oil & Gas Co.	420
Panhandle Oil & Ref. Co.	150
The Texas Co.	40
Miscellaneous	4,275
Mitchell County	1,650
Reagan County	11,180
Jack County	25
Scurry County	45
Carson County	850
Hutchinson County	150
Callahan County	1,705
Wilbarger County	4,445
Montague County	90
Total	33,075
Total this week	129,200
Total last week	127,045
Gain	2,155

Wichita County Completions

Burnett Ranch Oil Co.'s No. 9 Burnett 35 bbls. at 1,820 feet; Magnolia Petroleum Co.'s No. 41 Rio Bravo 15 bbls. at 1,540 feet; same company's No. 4-B Waggoner dry at 2,240 feet; Ross Oil Co.'s No. 1 Waller 10 bbls. at 740 feet; Staley and others' No. 6 Ramming, 10 bbls. at 1,690 feet.

Archer County Completions

Archer Oil Co.'s No. 1 Dowlen dry at 1,695 feet; Carter and others' No. 18-E White, 45 bbls. at 1,609 feet; Electra Gulf Oil Co.'s No. 1 Andrews, dry at 1,800 feet; Franklin and others' No. 2-B Parrish, 65 bbls. at 1,550 feet; Humble Oil & Refining Co.'s No. 2 Oil Investment Co., 40 bbls. at 1,425 feet; Oil Investment Co.'s No. 4 Fee, 40 bbls. at 1,200 feet; Underwood Drilling Co.'s No. 1 Wilson, dry at 1,703 feet; Cline and others' No. 2 Cowan, dry at 1,205 feet; Daniels and others' No. 1 Stamfli, 200 bbls. at 1,254 feet; Grisham and others' No. 7 Davis, 65 bbls. at 1,080 feet; Gwynn and others' No. 1-B Rogers, 60 bbls. at 1,277 feet; Hobbs and others' No. 2 Lane, dry at 1,470 feet; Howland and others' No. 1 Andrews, dry at 1,104 feet; Humble Oil & Refining Co.'s No. 3 Wood, dry at 1,351 feet; Maer and others' No. 1 Monohan, dry at 1,401 feet; Midway Development Co.'s No. 1 Morrison, dry at 1,503 feet; Murchison and others' No. 5 Wood, dry at 1,375 feet; Norton and others' No. 1 Wilhelm, dry at 1,450 feet; Petroleum Production Co.'s No. 5 Bridwell, 400 bbls. at 1,140 feet; same company's No. 4 Hausler, 120 bbls. at 1,143 feet; same company's No. 6 Hausler, 100 bbls. at 1,119 feet; same company's No. 7 Hausler, 300 bbls. at 1,148 feet; Ray and others' No. 7 Hausler, 60 bbls. at 1,135 feet; Roxana Petroleum Corp.'s No. 1 Blewett, dry at 1,470 feet; same company's No. 2 Kunkel, 950 bbls. at 1,162 feet; Shamrock Oil Co.'s No. 5-C Richardson, 100 bbls. at 1,301 feet; Southern Exploration Oil Co.'s No. 1 Kinder, dry at 1,354 feet; Sun Oil Co.'s No. 1 Kunkel, 250 bbls. at 1,147 feet; Swastika Oil Syndicate's No. 3 Neal, 100 bbls. at 1,290 feet; The Texas Co.'s No. 3-A Davis, 10 bbls. at 1,095 feet; Wellett and others' No. 3 Griffin, 150 bbls. at 1,309 feet; same company's No. 4 Griffin, dry at 1,309 feet.

Young County Completions

Burton and others' No. 1 Eichelberger, dry at 1,208 feet; Carey and others' No. 1 Roach, dry at 1,502 feet; Grisham and others' No. 1 Hall, dry at 1,509 feet; Jones and others' No. 1 Marshall, dry at 1,306 feet; Knight and others' No. 1

Fourteen Worthington Centrifugal Pumps in Roxana Petroleum Corporation Refinery, Wood River, Ill.

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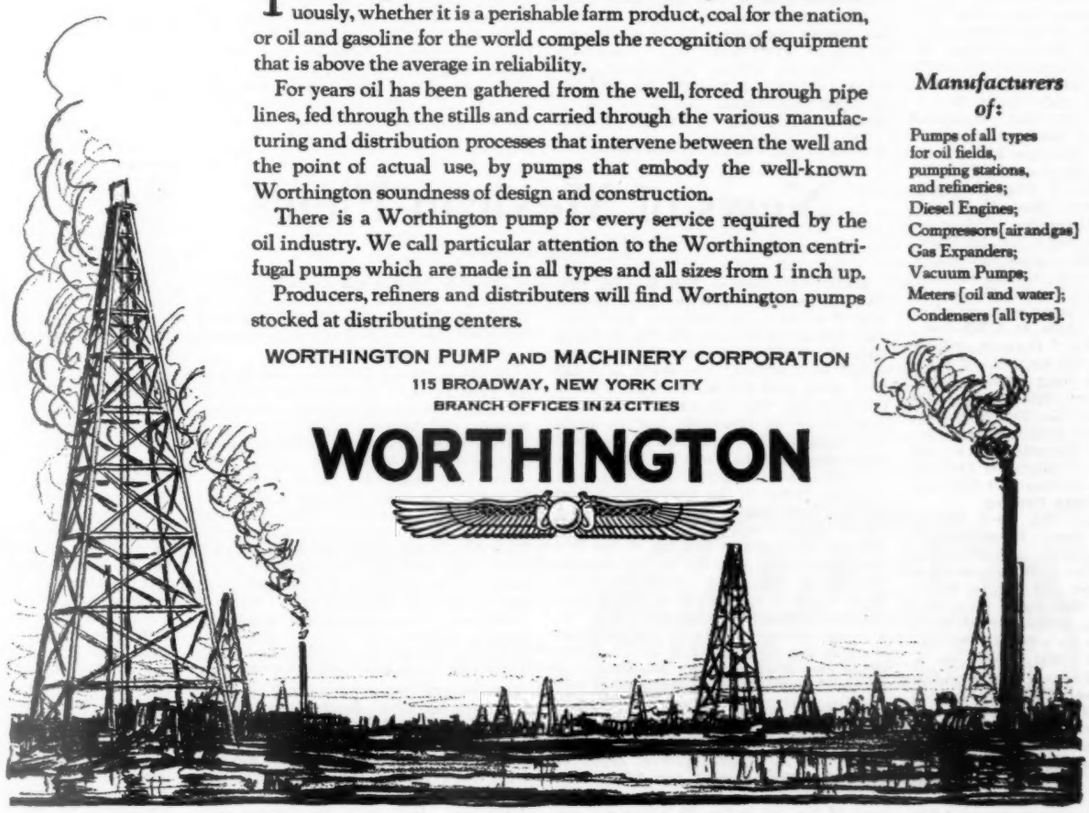

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Brooks, dry at 1,002 feet; Murchison and others' No. 3 Gambrell, 10 bbls. at 1,212 feet; Murchison and others' No. 4 Gambrell, 190 bbls. at 1,213 feet; same company's No. 1 Schlegel, 190 bbls. at 1,217 feet; Nine Hundred Oil Co.'s No. 5 Benson, 15 bbls. at 889 feet; Simms Oil Co.'s No. 3 Carpenter, 230 bbls. at 1,042 feet; Whitehead and others' No. 1 Belknap, dry at 1,510 feet.

Stephens County Completions

Mid-Kansas Oil & Gas Co.'s No. 3 Hill, account 2, 100 bbls. at 3,210 feet; Hart Oil Corp.'s No. 6 Hart, dry at 3,879 feet; Landreth Production Co.'s No. 1 Ward, dry at 3,414 feet; Lewis Oil Co.'s No. 1 Brown, 25 bbls. at 4,083 feet; Magnolia Petroleum Co.'s No. 5 McCauley, 390 bbls. at 3,954 feet; Texas Pacific Coal & Oil Co.'s No. 2 Gardenshire, account 2, 80 bbls. at 2,079 feet.

Eastland County Completions

Brothers and others' No. 1 Watson, dry at 3,180 feet; Knox Lewis Oil Co.'s No. 1 White, 10 bbls. at 3,560 feet; Weaver Oil Corp.'s No. 1 Dulin, 250 bbls. at 3,432 feet.

Wildcat Completions

Wilbarger County: Bridwell and others' No. 3 Stephens, 325 bbls. at 2,291 feet.

Baylor County: Magnolia Petroleum Co.'s No. 2 Portwood, dry at 1,423 feet.

Clay County: Cumley and others' No. 2 Stine, dry at 1,792 feet; Shelton Oil Co.'s No. 3 Boddy, dry at 1,300 feet.

Wise County: Wynne Brothers' No. 1 Castleberry, dry at 1,365 feet.

Palo Pinto County: Hart and others' No. 1 Smith, dry at 2,005 feet; Little Caddo Syndicate's No. 1 Fitzgerald, dry at 1,853 feet.

Callahan County: O'Donnell and others' No. 1 Cathey, dry at 1,800 feet.

Reagan County: Big Lake Oil Co.'s No. 15 University, 1,400 bbls. at 2,876 feet.

Upton County: Virginia Texas Petroleum Co.'s No. 1 University, dry at 3,740 feet.

Wichita County Drilling

Magnolia Petroleum Co.'s No. 109 Reilly is cleaning out at 1,680 feet; same company's No. 112 Reilly, drilling at 1,295 feet; same company's No. 113 Reilly, drilling at 1,060 feet; Texhoma Oil & Refining Co. and others' No. 1 Bailey, drilling at 1,300 feet; Hammon and others' No. 1-A McCarty has oil show at 1,610 feet; Hawkins and others' No. 3 Watkins, drilling at 1,500 feet; Maer and others' No. 1 Allen & Kemp, drilling at 1,610 feet; Magnolia Petroleum Co.'s No. 9 Abernathy, drilling at 975 feet; same company's No. 10 Maer, bailing at 1,760 feet; same company's No. 4-F Peer Waggoner, drilling at 1,980 feet; same company's No. 9-A Waggoner, drilling at 1,115 feet; same company's No. 2 Watkins has oil show at 1,765 feet; Moore and others' No. 2 Burnett, drilling at 1,560 feet; Ross Oil Co.'s No. 2 Waller, drilling at 450 feet; Section 2 Oil Co.'s No. 5 Burnett, drilling at 1,200 feet; The Texas Co.'s No. 298 Waggoner, drilling at 1,308 feet; Texhoma Oil & Refining Co.'s No. 7 Burnett has an oil show at 1,819 feet; Underwood Drilling Co.'s No. 1 Hodges, drilling at 1,100 feet.

Archer County Drilling

Carter and others' No. 19-E White, drilling at 1,100 feet; Franklin and others' No. 3-B Franklin, underreaming. Hobbs and others' No. 5 Wilson, drilling at 1,180 feet; Jetter and others' No. 3 White, drilling at 980 feet; Knox and others' No. 1 Wilson, drilling at 200 feet; Magnolia Petroleum Co.'s No. 12 Parrish, drilling at 580 feet; Mid-Kansas Oil & Gas Co.'s No. 1 Wilson, drilling at 1,605 feet; Oil Investment Co.'s No. 5 fee, cleaning out at 1,105 feet; Phillips and others' No. 5 Wilson, has an oil show at 1,517 feet; same company's No. 6 Wilson has oil showing at 1,519 feet; Prairie Oil & Gas Co.'s No. 31-D Wilson, drilling at 250 feet; Simms Oil Co.'s No. 5 Parrish, cementing casing at 1,590 feet; Stidham and others' No. 8 White, drilling at 1,500 feet; same company's No. 15 White, fishing at 1,390 feet; Verschoyle and others' No. 9-B Wilson, drilling at 1,345 feet; Eureka Drilling Co.'s No. 1 Parkey, drilling at 630 feet; Gwynn and others' No. 1 Pastusek, drilling at 1,140 feet; Magnolia Petroleum Co.'s No. 1 Lauster, drilling at 1,125 feet; McNamara Brothers' No. 1 Justice, drilling at 1,495 feet; Atlantic Oil Production Co.'s No. 2 Ward, drilling at 890 feet; Bridwell and others' No. 1 Boren, drilling at 450 feet; Clark and others' No. 1 Rogers, drilling at 1,030 feet; Davis-Hart Oil Co.'s No. 2 Kunkel, drilling at 650 feet; Grisham and others' No. 1 Hayter, drilling at 200 feet; Gwynn and others' No. 2 J. F. Rogers, drilling at 200 feet; Gwynn and others' No. 2-B M. B. Rogers, drilling at 1,160 feet; Hardesty and others' No. 1 Kunkel, drilling at 1,160 feet; Hardesty and others' No. 1 Kunkel, drilling at 540 feet; Harris and others' No. 2 Stamfli, drilling at 830 feet; Harvey and others' No. 1 Kunkel, drilling at 900 feet; Humble Oil & Refining Co.'s No. 2 Hausler, drilling at 200 feet; same company's No. 1 Hayster, drilling at 910 feet; same company's No. 2 Hayter, drilling at 820 feet; same company's No. 3 Hayter, drilling at 750 feet; same company's No. 1 Stamfli, drilling at 1,110 feet; same company's No. 2 Stamfli, drilling at 1,020 feet; Maer and others' No. 1 Graham, drilling at 1,000 feet; same company's No. 2 Monohan, drilling at 1,295 feet; Magnolia Petroleum Co.'s No. 1 Rogers, drilling at 970 feet; same company's No. 1 Stamfli, drilling at 870 feet; Medora Oil Co.'s No. 1 Hayter, drilling at 1,030 feet; Murchison and others' No. 15 Griffin, drilling at 150 feet; same company's No. 3-A Harmel, drilling at 850 feet; same company's No. 8-B Harmel, drilling at 850 feet; same company's No. 9-B Harmel, drilling at 940 feet; same company's No. 7-C Harmel, drilling at 720 feet; Muse and others' No. 1 Brazina, drilling at 1,490 feet; Mutual Oil Co.'s No. 6 Harmel, drilling at 650 feet; Petroleum Production Co.'s No. 8 Hausler, fishing at 500 feet; Roxana Petroleum Corp.'s No. 3 Kunkel, fishing at 1,135 feet; same company's No. 6 Kunkel, drilling at 650 feet; Shamrock Oil Co.'s No. 6-C Richardson, drilling at 1,230 feet; Shaw and others' No. 5 Hausler, drilling at 600 feet; same company's No. 6 Hausler, drilling at 630 feet; same company's No. 1-A Hayter, drilling at 1,060 feet; same company's No. 1 Kunkel, drilling at 700 feet; The Texas Co.'s No. 1 Mineral Fee, drilling at 1,200 feet; same company's No. 2 Mineral Fee, drilling at 620 feet; United Central Oil Corp.'s No. 1 Rogers, drilling at 1,240 feet; White and others' No. 1 Kunkel, bailing, Wollett and others' No. 5 Griffin, drilling at 930 feet.

Young County Drilling

Andrade and others' No. 1 Gose, drilling at 520 feet; Burns and others' No. 1 Tucker, drilling at 1,250 feet; Burton and others' No. 1 Hawkins, drilling at 530 feet; Dunn and others' No. 1 Craig, drilling at 2,230 feet; Gilliland and others' No. 1 Wilde, drilling at 575 feet; Harvey and others' No. 1 Wilson, drilling at 600 feet; Hinson and others' No. 1 Ribble, drilling at 1,500 feet; Johnston and others' No. 1 Daws, drilling at 340 feet; Kentucky Oil Co.'s No. 1 Bullock, drilling at 460 feet; Krog and others' No. 1 Boone, drilling at 570 feet; Mooers and others' No. 1 Ickert, drilling at 1,070 feet; Murchison and others' No. 2 Schlegel, drilling at 400 feet; Olney Production Co.'s No. 1 Kemp, drilling at 1,110 feet; Reed and others' No. 1 Foster, drilling at 860 feet; Simms Oil Co.'s No. 5 Carpenter, drilling at 640 feet; Texas Pacific Coal & Oil Co.'s No. 1 Carpenter, drilling at 1,010 feet; The Texas Co.'s No. 1 Graham, drilling at 950 feet; Verschoyle and others' No. 1 Wainscott, drilling at 1,490 feet; Wilson and others' No. 1 Campbell, drilling at 925 feet.

Stephens County Drilling

Critten and others' No. 8 Cobb, fishing at 3,320 feet; Illinois Oil Co.'s No. 4-A Walker & Caldwell, drilling at 1,000 feet; Mid-Kansas Oil & Gas Co.'s No. 15 Hill, drilling at 2,365 feet; same company's No. 11 Tullos account 2, drilling up bailer at 3,740 feet; Pender Production Co.'s No. 5 Keel, spudding; Prairie Oil & Gas Co.'s No. 15 Atkins, cleaning out at 3,260 feet; same company's No. 2 Caldwell, swabbing at 3,288 feet; Republic Production Co.'s No. 2 Knox, drilling by tools at 3,560 feet; Snowden & McSweeney's No. 5 Higginbotham, drilling at 3,155 feet; Sun Oil Co.'s No. 5 Stoker, drilling at 465 feet; Texas Consolidated Oil Co.'s No. 6 Martin, drilling at 3,010 feet; Walker and others' No. 4 First National Bank, drilling at 1,200 feet; Welsh and others' No. 2 Brown, spudding; Adamson and others' No. 2 Bradford, drilling at 1,675 feet; Head and others' No. 1 Post, cleaning out at 2,255 feet; Hughes and others' No. 4 Gandy, drilling at 1,475 feet; Knox and others' No. 1 Flournoy, fishing at 3,840 feet; Magnolia Petroleum Co.'s No. 7 Brown, drilling at 3,220 feet; same company's No. 8 Brown, drilling at 3,175 feet; same company's No. 5 Walker, drilling at 560 feet; Pearson and others' No. 3 Williams, drilling at 2,085 feet; Scott and others' No. 1 Curry, drilling at 2,705 feet; Simms and others' No. 6-A Jackson, fishing at 2,750 feet; Stidorf Brothers' No. 3 Sorgee, drilling at 1,550 feet; Sun Oil Co.'s No. 6 Stoker, drilling at 3,560 feet; Texas Pacific Coal & Oil Co.'s No. 1 Veale, drilling at 3,775 feet.

Eastland County Drilling

Dyer Brothers' No. 1 Norton, drilling at 1,700 feet; Eby and others' No. 6 Miller, drilling at 1,550 feet; Panhandle Refining Co.'s No. 1 Hightower has oil show at 3,005 feet; Pittman and others' No. 2 Pettit, spudding; Reclamation Oil Co.'s No. 6 Bond, fishing at 2,195 feet; Teatsworth and others' No. 3 Scott, drilling at 1,075 feet; Burkett and others' No. 1 Stanton, drilling at 2,000 feet; Kimmell and others' No. 1 Lamb, drilling at 1,100 feet; Rosenfield and others' No. 1 Burnett, drilling at 3,225 feet; Stoot and others' No. 1 Hazel, drilling at 1,800 feet; Ladd and others' No. 1 Owens, drilling at 2,225 feet; Weaver Oil Corp.'s No. 1 Hatton, drilling at 1,400 feet.

Wildcats Drilling

Hutchinson County: Barnum and others' No. 1 Johnson, drilling at 2,905 feet; New Domain Oil Co.'s No. 1 Barton, drilling at 1,100 feet; Prairie Oil & Gas Co.'s No. 1 Shaw, drilling in lime at 2,960 feet; Twin Six Oil Co.'s No. 1 Kingsland has oil show at 2,988 feet; Wilson and others' No. 1 Whittenburg, fishing at 2,905 feet.

Gray County: Anderson and others' No. 1 Bradford, setting casing at 1,465 feet; Clark and others' No. 1 Combs & Worley, drilling at 2,685 feet.

Wilbarger County: Atlantic Oil Production Co.'s No. 1 Parker, setting casing at 1,205 feet; Barkley and others' No. 1 Stephens, drilling at 2,200 feet; Bridwell and others' No. 3 Dill, drilling at 1,705 feet; same company's No. 4 Dill, drilling at 1,600 feet; same company's No. 6 Stephens, drilling at 2,130 feet; same company's No. 1 Waggoner, spudding; Dill Farm Oil Co.'s No. 1 Dill, drilling at 2,460 feet; Wood and others' No. 1 George, spudding; Hamilton and others' No. 1 Kester, drilling at 1,715 feet; Hoffer Oil Corp.'s No. 1 Waggoner, spudding; Humble Oil & Refining Co.'s No. 2 Castlebury, drilling at 1,235 feet; same company's No. 3 Castlebury, drilling at 1,050 feet; same company's No. 4 Castlebury, drilling at 1,220 feet; same company's No. 5 Castlebury, drilling at 1,215 feet; same company's No. 1 Waggoner, drilling at 1,390 feet; Kolp and others' No. 1 Waggoner, fishing at 1,757 feet; Levy and others' No. 1 Wheeler, drilling at 1,220 feet; Lippard Oil Co.'s No. 1 Fluhman, drilling at 870 feet; Little Oil Co.'s No. 1 Youngblood, drilling at 1,630 feet; McCamey and others' No. 2 Richardson, drilling a sand at 1,295 feet; same company's No. 2 Stephens, fishing at 500 feet; same company's No. 3 Stephens, spudding; Magnolia Petroleum Co.'s No. 66 fee, drilling at 1,560 feet; same company's No. 41 Sumner, drilling at 520 feet; Oklahoma Refining Co.'s No. 1 Bowers, fishing at 2,215 feet; Petroleum Production Co.'s No. 3 Dill, drilling at 1,350 feet; Ray and others' No. 6 Bond, drilling at 1,200 feet; Shipley and others' No. 1 Murphy, drilling at 560 feet; Skinner and others' No. 1 Streit, drilling at 1,760 feet; South Vernon Oil Co.'s No. 12 Stephens, spudding; Staley and others' No. 1 Stephens, drilling at 1,050 feet; The Texas Co.'s No. 1-B Castlebury, underreaming; same company's No. 202 Waggoner, drilling at 880 feet; same company's No. 297 Waggoner, drilling at 1,060 feet; Texhoma Oil & Refining Co. and others' No. 1 Thomas, drilling at 225 feet; Waggoner and others' No. 1 Bond, drilling at 2,525 feet; Wells and others' No. 3 Waggoner, drilling at 400 feet; Winnipeg Oil Co.'s No. 5 Bond, drilling at 600 feet; Wood and others' No. 1

(Continued on Page 98)

News of Mexican Fields

By George Blardone

TAMPICO, Mexico, Feb. 6.—The outstanding feature of Mexican pools for the past few days is Huasteca Petroleum Co.'s (Mexican Petroleum), No. 50 Cerro Azul, in the South Fields, which is completed at a sub-sea level depth of 1,249 feet, rated good for 50,000 bbls. This is the well that was discussed in this correspondence in December last as probably being higher on the fold of the Tamasopa limestone than was the famous No. 4 Cerro Azul (completed in 1916), still a potent factor in the production figures of the pool under discussion. It was stated by me at that time that this test was evidently nearer the top of the fold than was No. 4 referred to, the reasons being given then. The completion of No. 50 at 111 feet, sub-seal level, higher than No. 4, confirms this prediction. The No. 4 is in evidence as being on the west slope of the fold, and it is still a potent producer, after having produced say around 70,000,000 bbls.; No. 50 is a real potential well of which much hope might be expressed for such a lusty infant.

Huasteca's No. 53, west of No. 4, is a completion at a sub-sea level depth of 1,561 feet, rated good for 1,500 bbls. Some distance south, bearing south by west of No. 50, is No. 49, which did not come to expectations as it is a fluid well at a sub-sea level depth of 1,477 feet. It may strip a little oil. South, in Chapopote Nunez, just north of the Alamo of the Penn Mex Fuel Oil Co., (and north of the Tuxpam River), is No. 9 Chapopote Nunez, which was finished a dry hole at 2,284 feet.

The only other south fields completion of record at this writing is Mexican Eagle Oil Co.'s No. 43, Lot 260 Amatlan, rated 300 bbls. at 1,647 feet, sub-sea level.

Northern Fields

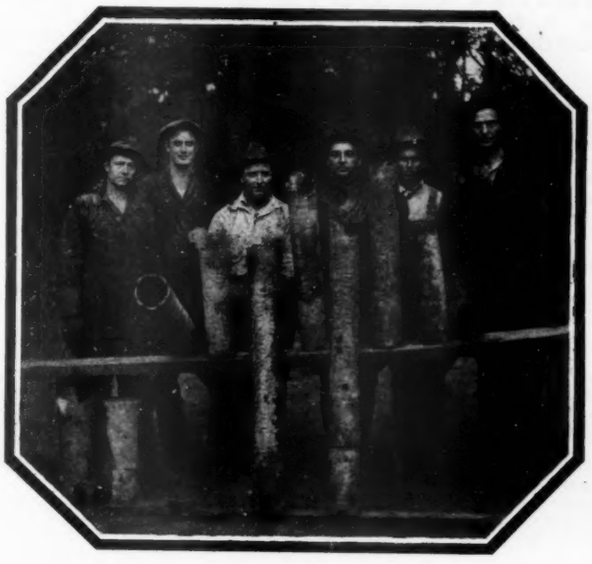
In the northern fields the completions the past 10 days numbered 19 wells, of which six can be placed in the production column. Of these six producers the total potential head production can be placed at only 13,545 bbls.

The best well in the list is La Corona Petroleum Co.'s No. 164, Lot 4, Cacalilao sector, finished for 6,000 bbls. The next best well in the list is Mexican Petroleum Co.'s No. 51 La Dicha finished for 5,000 bbls. The well first mentioned was finished at the shallow depth of 1,530 feet; the second was finished at a depth of 1,902 feet. The rest of the pay completions follow; La Corona Petroleum Co.'s No. 147-A, Lot 4 Cacalilao, depth 1,990 feet, rated 500 bbls.; its No. 149, same lot and sector at a depth of 2,410 feet, say 30 bbls. International Petroleum Co.'s No. 129, Lot 5 Cacalilao, is a good 2,000-bbl. well at 1,980 feet.

The other pay completion is Mexican Fuel Co.'s No. 16 Santa Fe (Topila) which is a mere teaser of say 15 bbls. at 2,505 feet. How hath the glorious days of yesteyear fallen! There were times not so long distant that wells anywhere under 100 bbls. would not be listed at all. But now how different! Anything that can be at all handled, (its juxtaposition to other producers considered in overhead costs), is ranked as a producer in the

(Continued on Page 98)

"Luffing" on liners stuck in three wells; pulls in all derricks except one—a MOORE



Crew of Bodcaw No. 4 with the eight pieces of broken liner

Liner parted eight times; no damage to Moore Derrick

THE strength of the tubular leg section, weight for weight, used in Moore derricks, is nearly double that of any other section used for derrick legs. When such a derrick in addition is reinforced by a set of "relegs" consisting of plain 4-inch pipe (used drill pipe may be used) attached by means of Moore special fittings, the strength of the derrick is doubled and tripled. The stresses possible in the case described here, are estimated at about 428,000 lbs. or more. No wood derrick can be safely depended on to stand such stresses. But a light Moore Derrick with 3" 7.57-lb legs, reinforced with 4" 15-lb. "Relegs" will stand a stress of 247,850 lbs. with a factor of safety of 4, its ultimate strength being thus nearly one million pounds or 500 tons.

Catalog gives more complete information. Free for the asking.

BODCAW NO. 4 WELL SAVED

Wood Derricks Pulled in— MOORE STANDS

The Ohio Oil Company recently found it necessary to pull the 5 3/16" liner on their No. 4 Bodcaw Lumber Company well at Cotton Valley, Louisiana. Over this well they had an 88'3" Moore Tubular Derrick, equipped with 4" 15-lb. reinforcing legs or "relegs." Nearby the driller of two other wells undertook to do the same thing with wood derricks. J. S. Hasson, General Superintendent, and M. V. Pepsaire, Drilling Superintendent for the Ohio Oil Company report that after unsuccessfully attempting to pull the liner in Bodcaw No. 4 with seven and nine lines, it was decided to "luff" it; this being the last and final remedy in rotary drilling. After stringing up a three-fall luff on seven lines, making a total of twenty-one lines, they luffed on the stuck liner for a week, with the result that the liner was pulled apart eight times but in spite of the enormous stress imposed on the Moore derrick, it stood up and suffered no harm whatever. By this method, they were finally enabled to clean the hole and complete the well as a producer.

Other Wells Doubtful

The owners of the other two wells were not so lucky. One of them, after pulling in the wood derrick three times, parted the liner below the casing, compelling the crew to side track the liner in an attempt to complete the well. The other had almost exactly the same experience. Neither hole can be cleaned, and successful completion of the wells is doubtful.

The superintendents and crews of the Bodcaw No. 4 are unstinted in their praise of the Moore derrick, giving it full credit for its strength which enabled them successfully to work out of their difficulties.

Lee C. Moore & Company, Inc.

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MOORE TUBULAR STEEL DERRICKS

North Louisiana-Arkansas

By M. L. Vaughn

Slight decline in production. Waskom gas field not so good as expected, but hopes in deeper drilling. New gas sand in Elm Grove. Ohio Oil Co.'s No. 13 Bodcau, Cotton Valley, makes 350 bbls.; D. N. Johnson's No. 3 Ferris, Ouachita County, pumps 200 bbls. Standard Oil Co.'s No. 1 Alphin, 100 bbls.

SHREVEPORT, La., Feb. 9. — A slight falling off in production is noted in both Louisiana and Arkansas during the past week, the decrease averaging 407 bbls. a day. In Arkansas, the Nevada, Stephens and El Dorado districts showed slight increases in production, more than offset, however, by a falling off in both light and heavy oils in Smackover. In North Louisiana the output from each district was practically the same as for the week previous, the decrease amounting to only 92 bbls. a day. Total production from the combined fields averaged 155,583 bbls., distributed as follows:

North Louisiana

Bellevue	4,120
Caddo light	9,320
Caddo heavy	2,120
Cotton Valley	7,340
De Soto and Red River	4,420
Elm Grove	606
Haynesville	14,928
Homer	6,840
Total	49,693

South Arkansas

El Dorado	9,840
Nevada County	1,105
Smackover light	32,505
Smackover heavy	60,310
Stephens	2,130
Total	105,890
Total both fields	155,583
Decrease	407

Commissioner of Conservation W. H. Everett has issued an announcement that, effective February 15, the consumption of natural gas in the Monroe gas field would be reduced from 400,000,000 feet per day to 285,000,000 feet, this to remain in effect for six months, at which time it will be decided whether or not to make a further reduction. A meeting of carbon manufacturers will be held in New Orleans for the purpose of alloting the amount of gas each company may use. In the event the carbon makers can agree among themselves, no effort will be made by the conservation department to make the allotment.

Waskom Gas Field

The Waskom gas field, in the south end of Caddo Parish, and extending west into East Texas, is not proving as reliable as expected, and unless deep drilling produces better results, it is believed the gas supply from this district will last only a few months. The Bethany and Elm Grove gas districts are also showing signs of exhaustion, although recent development in the Elm Grove territory has resulted in the discovery of a new gas sand at 1,900 feet from which in the past few months 150,000,000 feet of gas has been added to the local supply, and which, it is believed, extends over the entire Elm Grove district. The nearest gas field of importance, as a source of supply for Shreveport, is in Webster Parish, in the Cotton Valley, Springhill and Shongaloo districts, and it is estimated it would cost at least $1,000,000 to lay the necessary lines for this purpose.

It is possible that the deep sand development now in progress in the Waskom district will be successful and a more permanent supply of gas obtained from this field.

Moffitt & Murphy have sold their half interest in 200 acres in the Cotton Valley district to the Alabama Petroleum Co. for a consideration of $105,000. The land had been owned jointly by the two parties and the payment was made $20,000 in cash, a cancelled indebtedness of $50,000 and $35,000 to be paid out of the oil production.

Completions—Union County, Arkansas

Of the four completions in the Union County area of the Smackover Field during the week, three were in the Norphlet and one in the south end of the Louann district, with one 35,000,000-foot gas well and three oil wells having an aggregate initial production of 190 bbls.

The Gulf Refining Co. completed No. 11 Alphin, Section 2-16-15, making a 15-bbl. pumper at 2,004 feet, and No. 28 L. Werner, Section 6-16-16, pumping 75 bbls. at 2,270 feet.

The Natural Gas & Petroleum Co.'s No. 5 Murphy, Section 8-16-15, made 35,000,000 feet of dry gas at 2,389 feet.

The Standard Oil Co. of Louisiana completed No. 6 J. H. Alphin, Section 3-16-15, pumping 100 bbls. at 1,986 feet.

Ouachita County

Completions in the Smackover Field, in Ouachita County, numbered six, all producers, adding 465 bbls. to the output of the field.

Boger and others completed No. 2 Minor, Section 20-15-16, pumping 45 bbls. at 2,336 feet.

The Empire Gas & Fuel Co. completed No. 4 Bradley, Section 30-15-15, pumping 30 bbls. at 2,025 feet.

H. L. Hunt and others completed Anderson A-4, Section 23-15-17, making a 45-bbl. pumper at 2,299 feet.

D. N. Johnson's No. 3 Ferris, Section 34-15-15, is pumping 200 bbls. at 1,964 feet.

The Magnolia Petroleum Co. completed No. 4 Brown, Section 26-15-17, pumping 45 bbls. at 2,332 feet.

The Standard Oil Co. of Louisiana completed No. 1 Alphin in Section 2-16-15, making a 100-bbl. pumper at 1,990 feet.

Cotton Valley, Webster Parish

Two completions were made in the Cotton Valley district during the week, adding 355 bbls. to the output of the field.

The Ohio Oil Co. completed No. 13 Bodcau, Section 15-21-10, making a 350-bbl. pumper at 2,530 feet.

The Humble Oil & Refining Co.'s No. 4 Davis, Section 13-21-10, is pumping 5 bbls. at 2,512 feet.

Caddo Parish

Two small pumpers were completed in Caddo Parish during the week, both in the Pine Island district in the shallow sand.

The Dixie Oil Co.'s No. 3 Louisiana State, Section 13-21-15, made a 12-bbl. pumper at 1,634 feet.

The Tholl Oil Co. completed No. 6 Houston I. & B. Co., Section 13-21-15, pumping 20 bbls. at 1,636 feet.

Drilling Operations

Union County, Arkansas

A slight increase in drilling activity is noted throughout the Arkansas fields, with interest centered in the deep drilling in this territory. Three deep wells were completed during the past week and there are still a number of old wells now being deepened, to be heard from.

An interesting wildcat location has been made by Jones & Gazell, who have derrick up for No. 1 Murphy, Section 36-19-14, 10 miles east of the south end of the El Dorado district and within 2 miles of the Louisiana State line.

Arkansas Fuel Oil Co. has derrick up for No. 6 LaGrone, Section 1-16-17, and Arkado Oil Co. tested salt water at 2,360 feet in No. 5 Hatfield, Section 7-16-15, and is drilling deeper.

Considerable interest has been aroused by a slight showing of oil at 480 feet in a test on the Pate lease, drilled by Bradley & Caxart, in Section 16-17-17. The well is in the south end of the Louann district and has been temporarily closed down.

British Allied Estate's No. 2 Jones, Section 21-16-15, is standing with 200 feet of oil in the hole at 2,065 feet, and is arranging to pump. Broderick & Calvert are drilling at 2,270 feet in No. 2 Bradford, Section 8-16-15.

Crawford & Sebastian have derrick up for No. 8 Giller, Section 14-16-15; W. A. Dellmeyer, trustee, is down 1,960 feet in No. 1 Ezell, Section 13-17-15, reaming to bottom of hole.

Gulf Refining Co. is rigging up to drill No. 12 Alphin, Section 2-16-15; set 10-inch at 90 feet in No. 1 T. P. Howard, Section 13-16-17; bailing to test 10 feet of sand at 2,272 feet in No. 2 Johnette, Section 13-15-16; drilling at 650 feet in No. 29 L. Werner, Section 6-16-16, drilling at 1,850 feet in No. 30, same section, and drilling at 1,885 feet in No. 31 L. Werner and derrick up for No. 34 in Section 5-16-16.

Hickman and others are running core barrel at 2,400 feet in No. 1 Graves, Section 3-16-15; Hollyfield and others have derrick up for No. 7 Giller, Section 11-16-15, and Houston Oil Co. is drilling at 2,277 feet in No. 1 Miller, Section 3-16-15.

W. W. Jones and others have 200 feet of oil in the hole at 2,095 feet in No. 1 F. G. Murphy, Section 18-16-15; and building standard rig to pump; Liberty Oil Co. tested dry at 2,170 feet in No. 1 Davis, Section 31-16-14, and is waiting orders.

Lion Oil & Refining Co. has gone back into No. 5 Graves, the first big well completed in the deep sand, and arranging to drill deeper. The well was completed November 28, 1924, flowing 2,500 bbls. at 2,289 feet, but soon went into salt water.

Magnolia Petroleum Co. set 6-inch at 2,325 feet in No. 4 Campter-Campbell, Section 13-16-17, and arranging to test in shale at 2,265 feet in No. 2 J. G. Smith, Section 2-16-17. Natural Gas & Petroleum Co. is bailing casing at 2,290 feet in No. 1 Lawton, Section 10-16-15, and rigging up to drill No. 6 Murphy, Section 8-16-15.

P. F. O'Brien drilled to 3,036 feet in a wildcat test on fee land, Section 13-19-17, and closed down at this depth; Ohio Oil Co.'s No. 5 Pate, Section 10-16-15, has 300 feet of oil in the hole at 1,990 feet, Section 10-16-15, and arranging to pump; Pure Oil Co. has 300 feet of oil in the hole in No. 2 Hicks, Section 20-16-15, and arranging to pump at 2,135 feet, and is drilling in red shale at 3,415 feet in No. 1 Lawton, Section 30-16-15.

Russell and others set 12½-inch casing at 60 feet in No. 1 Brown, Section 8-17-14; Rutledge, trusteee, has derrick up for No. 5 Hodges, Section 6-16-16, and Standard Oil Co. has derrick up for No. 16 Alphin, in Section 2-16-15.

Ward and others are drilling at 1,520 feet in No. 1 Goodwin, Section 16-16-14, and Weatherbee and others are rigging up to drill No. 4 Rice, Section 6-16-16.

Ouachita County

The Arkansas Drilling Co. has 600 feet of oil in the hole at 2,318 feet in No. 4 Reynolds, Section 24-15-17, and derrick up for No. 6, same section. Boyd & Bonham are drilling at 1,970 feet in No. 1 Stringfellow, Section 28-15-16, an old well being drilled deeper, and Bray-Hawthorne tested dry at 2,252 feet in No. 1 Goodwin, Section 12-15-17, drilled to 2,375 feet and shut down.

R. E. Clark is arranging to pump No. 3 Smith, Section 25-15-17; Cumberland Petroleum Co. set 10-inch casing at 43 feet in No. 4 Reynolds, Section 23-15-17; Ellis & Dumas, rigging up to drill No. 4 Forest City Box Co., Section 31-15-16, and Forest Oil Co.'s No. 11 J. A. Cramer, Section 27-15-16, is full of oil at 2,293 feet.

Foster & McWilliams set 6-inch casing at 1,900 feet in No. 1 Neeley, Section 26-15-16; George Freely is building derrick for No. 1 Gibson, Section 26-15-17, and George & Jones set 12½-inch casing at 65 feet in No. 3 Ulmsted, Section 4-16-15.

Giles and others tested dry at 2,105 feet in No. 1 Hardin, Section 26-15-16, and arranging to drill deeper; Gray and others set 10-inch casing at 60 feet in No. 3 Myar, Section 32-15-16, and Gilliland and others set 6-inch casing at 2,280 feet in LaGrone B-5, Section 36-15-17, and are rigging up to drill Myar B-5, Section 30-15-16.

Gulf Refining Co. set 6-inch casing at 2,195 feet in No. 8 Fincher, Section 33-15-16 and made a location for No. 9, same section; drilled to 2,255 feet in Goodwin A-4, Section 5-16-15, where it has a fishing job; has derrick up for No. 1 Burkett, Section 7-15-16; arraging to pump No. 3 Henry Murphy, Section 2-16-15; set 10-inch casing at 97 feet in No. 3 Reynolds, Section 23-15-17; set 10-inch at 90 feet in No. 32 Werner and drilling in rock at 1,095 feet in No. 33, Section 32-15-16; drilling at 2,100 feet in Werner A-8, set 10-inch at 95 feet in A-9 and at 105 feet in A-10, Section 26-15-17, and set 10-inch at 295 feet in No. 13 Alphin, Section 2-16-15.

Howell and others set 10-inch casing at 65 feet in No. 4 Williams, Section 3-16-15; H. L. Hunt and others set 10-inch casing at 45 feet in Green B-6, Section 23-15-17, 6-inch at 2,265 feet in No. 3 Halton, Section 23-15-17, derrick up for Halton C-12 and set 10-inch in Halton C-13, Section 25-15-17, arranging to pump No. 1 School House, Section 26-15-17, set 10-inch at 43 feet in No. 1 Riley, Section 22-15-17, and has derrick up for No. 3 Street, Section 26-15-17.

J. W. King set 6-inch casing at 2,265 feet in No. 2 Jackson, Section 27-15-16; Kourey and others have 700 feet of oil in the hole in No. 1 Churchyard, Section 28-15-15, and arranging to pump at 2,068 feet; Leon and others junked the hole at 1,954 feet in No. 2 Berg, Section 4-16-15, and are moving over, and Magnolia Petroleum Co. is drilling at 1,000 feet in No. 1 Bettie Clawson, Section 35-15-17.

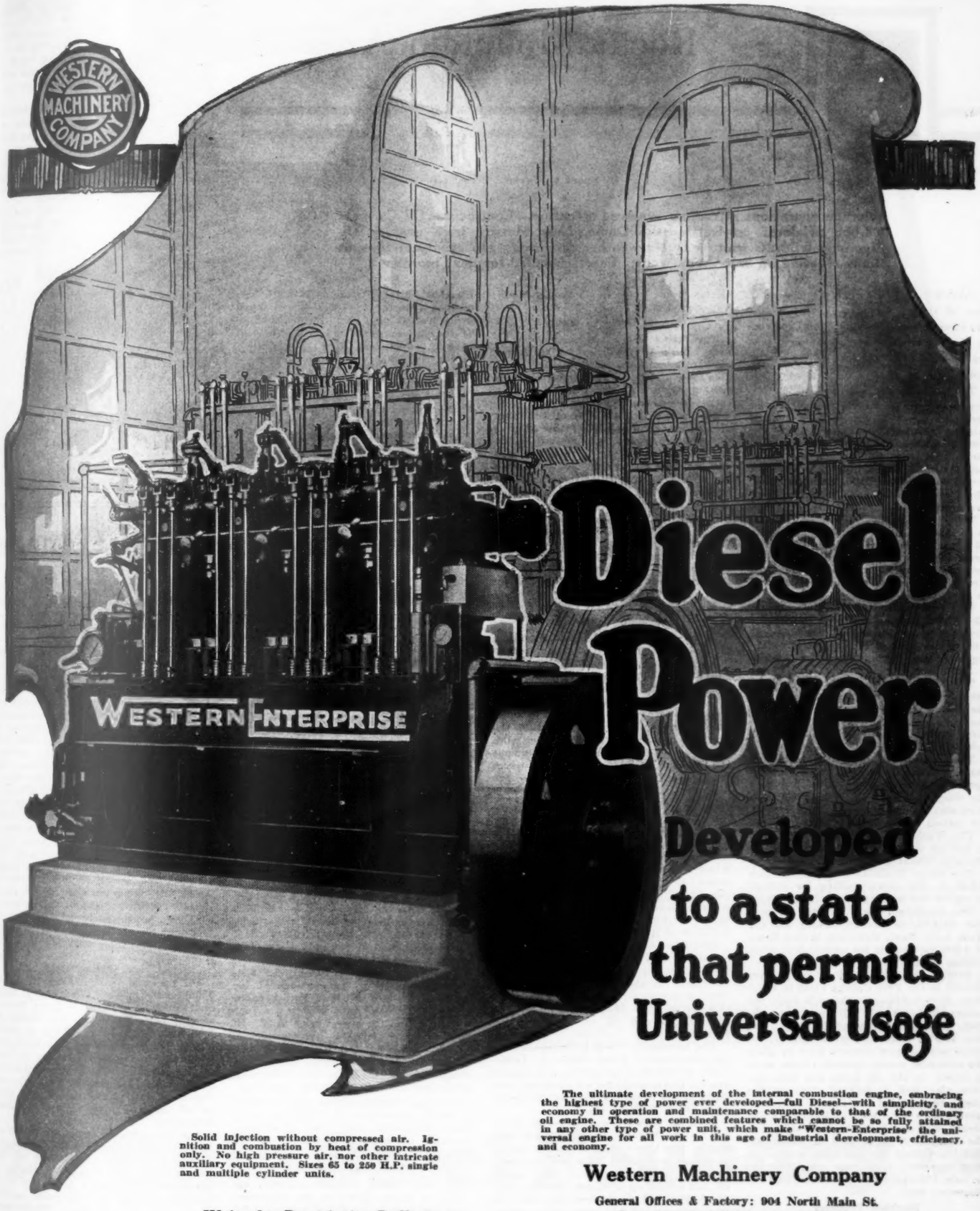
Mazda Oil Co. is arranging to test 25 feet of sand at 2,000 feet in No. 2 Berry, Section 33-15-15; Reynolds and others have 100 feet of oil in No. 4 Brierton, Section 25-15-17, and arranging to pump at 2,332 feet, and Reynolds & Thompson are reaming to set 6-inch casing at 2,305 feet in No. 1 S. A. Graves, Section 16-14-18.

Riggs and others are drilling at 2,100 feet in No. 2 Green, Section 23-15-17; Simms Oil Co. is drilling in rock at 2,015 feet in Berg E-3, Section 30-15-15, and J. S. Smith set 6-inch casing at 2,190 feet in Shirey A-2 and has derrick up for A-3 in Section 35-15-17.

Sun Oil Co. set 10-inch casing at 100 feet in No. 4 Hardin, Section 27-15-16; Sure Oil Co. has derrick up for No. 1 Snyder, Section 34-15-15, and Sutton and others set 4-inch casing with packer to test at 2,554 feet in No. 9 Hughes, Section 28-15-16.

The Texas Co. set 6-inch casing at 1,868 feet in No. 2 Johnson and at 1,887 feet in No. 3, Section 3-16-15; arringing to pump No. 3 and No. 4 Reynolds, drilling plug in 6-inch in No. 5 and set 10-inch

(Continued on Page 106)



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Rocky Mountain Area

By Frank B. Taylor

Colorado operations attracting renewed attention. Continental Oil Co. gets 800-bbl. producer on Rattlesnake Dome, New Mexico, high gravity oil. Wyoming wildcats waiting better weather conditions. Inactivity on Teapot Dome reacting on Salt Creek work. Case scheduled for next month.

CASPER, Wyo., Feb. 9.—The general tone of the oil business in this region has improved considerably due to the rise in the price of crude and oil men generally have assumed an optimistic outlook.

The Car Oil Co.'s well, located on Section 8-4-87, in Routt County, Colorado, on the Sage Creek structure, is attracting interest in Colorado. This well found the Frontier sand at 2,528 feet and a dose of water in that sand. The hole was cased and cemented and drilling has been resumed with the hole about 2,640 feet now. The Dakota sands are expected in about two more weeks.

The Texas Co.'s well on Section 7-6-86, in the same locality, is drilling below the oil show that caused a ripple of excitement a few weeks ago and is about 2,514 feet now. The oil and gas showing was struck in the shale and is not expected to last.

The Transcontinental's well on Section 32-4-89, in Routt County, on the Beaver Creek structure, is having some trouble with a lost joint of casing and is changing from cable to rotary tools. The depth is 3,496 feet.

The Utah Southern Oil Co.'s well on Section 25-24-61, in Pueblo County, on the Yellow Banks structure, is through the Dakota sand and found same dry, the sand was cut at 470 feet. The well is being drilled on down to the Lakota.

The Midwest has three wells drilling on the Iles Dome in Moffat County, two on Setcion 22-4-92, one at 2,800 feet and the other at 2,470 feet. This firm has a third well drilling on Section 27-4-92 with the bottom of the hole at 2,360 feet.

The Yarg Producing & Refining Co. is drilling on Section 14-4-92 on the Iles Dome in Moffat County, at 3,170 feet.

The Texas Production Co., on Section 9-4-91 is shut down waiting for cement to set on the small pipe at 3,815 feet.

The California Co.'s wildcat on Section 24-4-93, in Moffat County, on the West Axial Basin structure, is shut down at 4,000 feet and is not expected to start drilling until spring.

Brendel & Ache, drilling on Section 33-8-68 in the Fort Collins Field in Colorado, have taken over the well from the contracting firm and will finish same direct. The hole is now at 2,200 feet and this well is attracting much interest because several new surveys tend to show the structure swings eastward from what is shown on the old maps and that this particular well is located close to the axis. Several key beds have been correlated with the Union of California discovery well and instead of showing that the Brendel & Ache well is about 500 feet lower than the discovery well as at first supposed, it is now considered to be only 140 feet down structure from the discovery well.

Hogback Producer

The Continental Oil Co., drilling on the Rattlesnake Dome, about 12 miles west of the Hogback Field in San Juan County, New Mexico, brought in a good producer the past week estimated at 800 bbls. and of the same high gravity crude that has been found in Hogback and Rattlesnake heretofore. This oil has a gravity above 60 degrees and is the highest test crude found in the Rocky Mountain region.

Teapot Dome Inactivity

The Teapot Dome trial is scheduled for next month and the oil men at Casper hope to see it concluded at that time. Due to delays, the Teapot Dome has been tied up with no active work going on there except the pumping of the wells drilled, and if the case is decided in favor of the Mammoth Oil Co., this firm is reported ready to start activity again and bring the property up to its old high standard of operation. While Teapot Dome is a small part of the whole Salt Creek Field, its inactivity has reacted against the field work to an appreciable extent.

The Federal Court at Cheyenne is now hearing a petition by the Government's counsel in the Teapot case, in which the lawyers for the Government ask for authority to take depositions in France from H. M. Blackmer and J. E. O'Neil on matters relative to the coming trial.

Wyoming Wildcats

In the wildcat districts of Wyoming, the wells are shut down in the main, waiting on better weather conditions. The Southwestern Petroleum Co., drilling on Section 7-28-92 has abandoned the hole at 3,000 feet, but left the larger pipe in place on account of a gas flow found about 600 feet. This location is in the Crooks Gap structure and two other wildcats are also drilled there; the Fremont Oil Co., and the American Oil Workers Co. each drilled a well and the holes have been standing about 3,000 feet for over a year with nothing being done.

On Section 23-34-82, in Natrona County, the Bradford Wyoming Oil Co. drilling a wildcat on the Emigrant Gap structure west of Casper about 8 miles, is active again after a shutdown. The present depth is 2,200 feet and the company now intends to go on down to the Amsden sand which is expected about 2,500 feet. This would be a black oil producer if it finds oil.

The West Cat Creek Oil Co. has been organized and incorporated at Lewistown, Mont., by local capital to take over 760 acres in the west end of the Cat Creek structure and a test is to be drilled this spring. The holdings lie in Sections 21, 22, 26 and 35 of Township 15, Range 29.

The Lewistown Oil & Refining Co. paid the Government Land Office at Lewistown, $9,601.48, representing the royalty deu the Government for oil produced from lands in Cat Creek operated by the Lewistown Oil & Refining Co.

John W. Stewart, a tool dresser, working for the Midwest Refining Co. at Salt Creek, was blown from a derrick top by the wind, and killed. He was raising a line over the crown pulley when blown off and struck on a wagon standing near the derrick. He is survived by a wife and two children and had been in the employ of the Midwest since 1921.

The Kinney Coastal well on Section 19-39-78, in the Salt Creek Field, is still drilling and the hole is now at 3,810 feet and was filling with sulphur water. The Lakota sand is expected within the next 50 feet.

The Wyoming Syndicate, drilling a wildcat well southwest of Shoshoni, in Fremont County, Section 36-37-94, has reached a depth of 3,165 feet and found seven feet of sand that is considered to be the Muddy sand and which held a showing of oil and gas. The drillers expect the Dakota formation inside of the next 100 feet.

The Sheldon Dome well of the Mack Oil Co., drilling north of Riverton in Fremont County, about 50 miles, is ready to start work again after a shutdown due to bad weather. The hole is at 2,800 feet and has passed through two sands of the Frontier series with five more to come.

The Hatfield Oil Co.'s well, drilling on the Eight Mile Lake Dome in Carbon County, is below the first Wall Creek sand and at 3,455 feet. The second Wall Creek sand, where the production is expected, is about 200 feet below the bottom of the hole. The record of this well shows it to be 445 feet lower on the structure than No. 1 well.

The Continental Oil Co. on Section 28-2-43, in Yuma County, Colorado, on the Arickaree Dome, struck a gas flow at 1,475 feet in what is thought to be the Frontier sand and the flow is estimated at 3,000,000 feet daily. The objective of this well is the Dakota formation, expected about 2,200 feet.

The Notches Field has been shut in until warmer weather. The production from this field comes from one well and is black oil used in the making of asphalt at Casper.

Runs for the Week

Salt Creek	60,900
Teapot	1,340
Big Muddy	3,120
Grass Creek	1,320
Elk Basin	700
Greybull	30
Rock Creek	3,250
Rex Lake	130
Lance Creek	700
Poison Spider	240
Osage	350
Lander	200
Byron	90
Pilot Butte	30
Lost Soldier	4,730
Ferris	110
Craig	320
Fort Collins	600
Hogback	370
*Total	79,670

*Cat Creek and Sunburst omitted.
Notches and Mule Creek shut in; Hamilton Dome shut in account frozen lines.

News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., Feb. 7. — Official figures of the crude oil production for the Ontario fields for the year 1924 show a total output of 149,914 bbls. This represents a decrease of approximately 10 per cent from the 1923 figures.

In this year's official returns, the output is classified by counties. Most of the production comes from Lambton County, which includes the pools, formerly classified separately, of Petrolia-Enniskillen, Moore, Sarnia Township and Plymouth Township, as well as Oil Springs. The Lambton production amounts to 109,311 bbls. In Kent County, which includes the Tilbury, Raleigh, Thamesville, West Dover and Bothwell pools, the production is 31,335 bbls., mainly from the Bothwell Field. No production is reported from Elgin County, where a nominal production, gradually declining, has been previously reported from the small Dutton Pool. Middlesex County produced 8,862 bbls. in 1924 from the Mosa Pool, whose flush production in 1917 was over 100,000 bbls. In Brant County the Onondaga Pool had a production of 406 bbls. The Government bounty to crude oil producers, 52½ cents a barrel up to July 1, 1924, and thereafter 26¼ cents, amounted, for the year, to $61,064.18. For Petrolia crude the highest price during the year was $2.68 and the lowest price $1.93, Oil Springs crude running 7 cents higher. These prices do not include the Government bounty. The official figures are compiled by W. D. McDermid of Petrolia, supervisor of crude petroleum bounties.

To these Ontario figures will be added a small production of crude oil from New Brunswick, and some production, probably increased over 1923, from the Okotoks Pool in Alberta.

Test Near Toronto

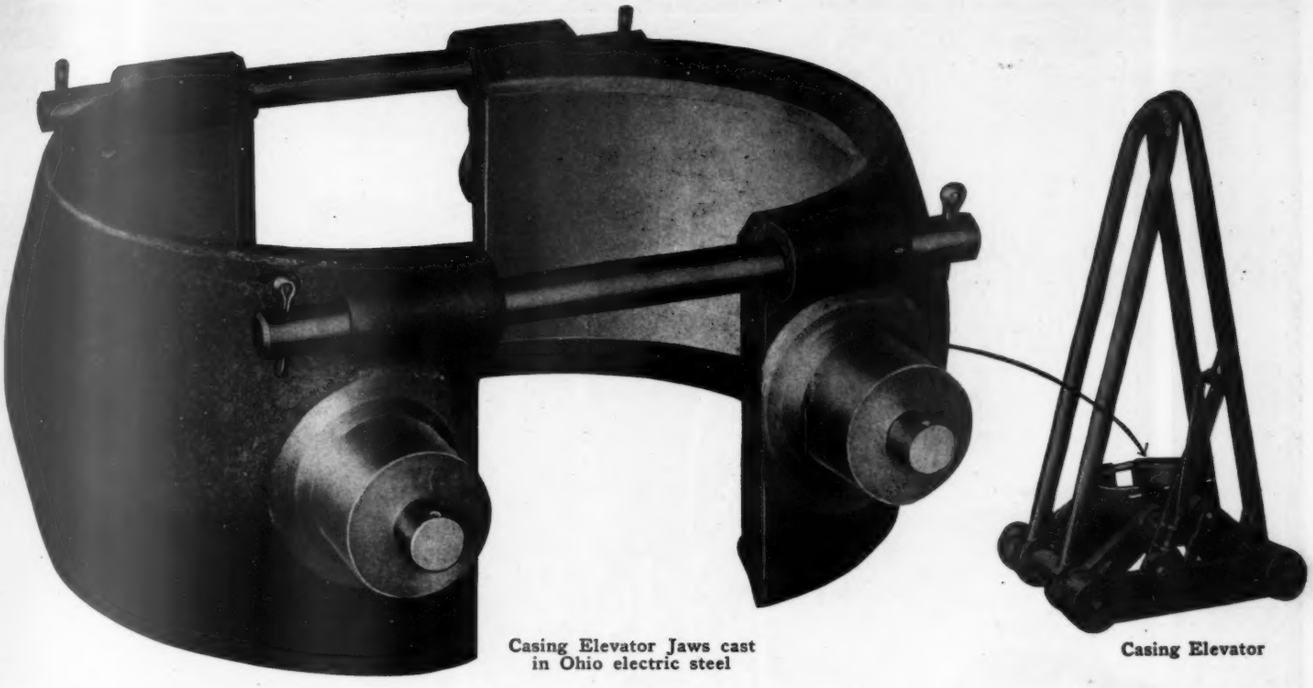
In the Ontario fields considerable interest is being shown in an important deep test now being drilled not far from Toronto. The test is being put down by Sir Donald Mann of Toronto, the location being the John Ash farm, Vaughn Township, York County, 16 miles north of Toronto. The test, previously erroneously reported as in charge of W. J. Hussey, of Petrolia, has been handled since February, 1924, by Alex Calvert, assisted by William Beach, of Petrolia. The well was actually started in November, 1922, by the Henderson interests of Toronto, and had reached a depth of 2,780 feet when, a year ago, Mr. Calvert took over the drilling. It is now drilling at a depth of 4,560 feet, being, it is stated, the deepest test yet drilled in Ontario. A log of the well as given shows some variations from conditions met in the deept tests in southwestern Ontario, where the Trenton limestone is encountered between 2,200 and 3,300 feet and is underlain only by a thin stratum of Potsdam sand immediately above the granite. In the test near Toronto the log is recorded as follows: Subsoil, 255 feet; shale, 255 to 510 feet; Trenton lime, 510 to 1,115 feet. From 1,115 feet to 4,265 feet the formations, otherwise unidentified, are described as hard gray, dark brown and red sandstone, very hard. In these formations gas is met at many horizons, but owing to the lightness of the rig the hole is partly filled with water and no estimate of any of the gas shows has been possible. From 4,265 feet to 4,560 feet the drill has encountered brown and gray limestone, with a few feet of black mica here and there.

New Shallow Field

In the new shallow field north of Thamesville, in Kent County, E. P. Rowe and associates, drilling on Lot 4, Concession 4, Zone Township, have drilled 15 feet into the oil sand. Oil rose to within 50 feet of the top of the hole, which will be shot. On Lot 5, Concession 13, Gore of Camden, Dr. Luke Smith, of Oakville, drilling for the Ajax Oil & Gas Co. and associated interests, struck a good show of oil under a shell in the Hamilton formation.

In Nova Scotia, tests of the Nova Scotia oil shales made at the Nova Scotia Technical College at Halifax by the Dominion Council of Scientific Research are reported to show a production of 50 Imperial gallons of high-grade paraffin oil to the ton of shale. Preliminary investigations indicate that 100,000,000 tons of shale are readily accessible, chiefly in Pictou County. The tests are being continued.

In the Canadian West, though no new developments are reported, the weather is moderating, indicating an early resumption of drilling activities in the various fields.



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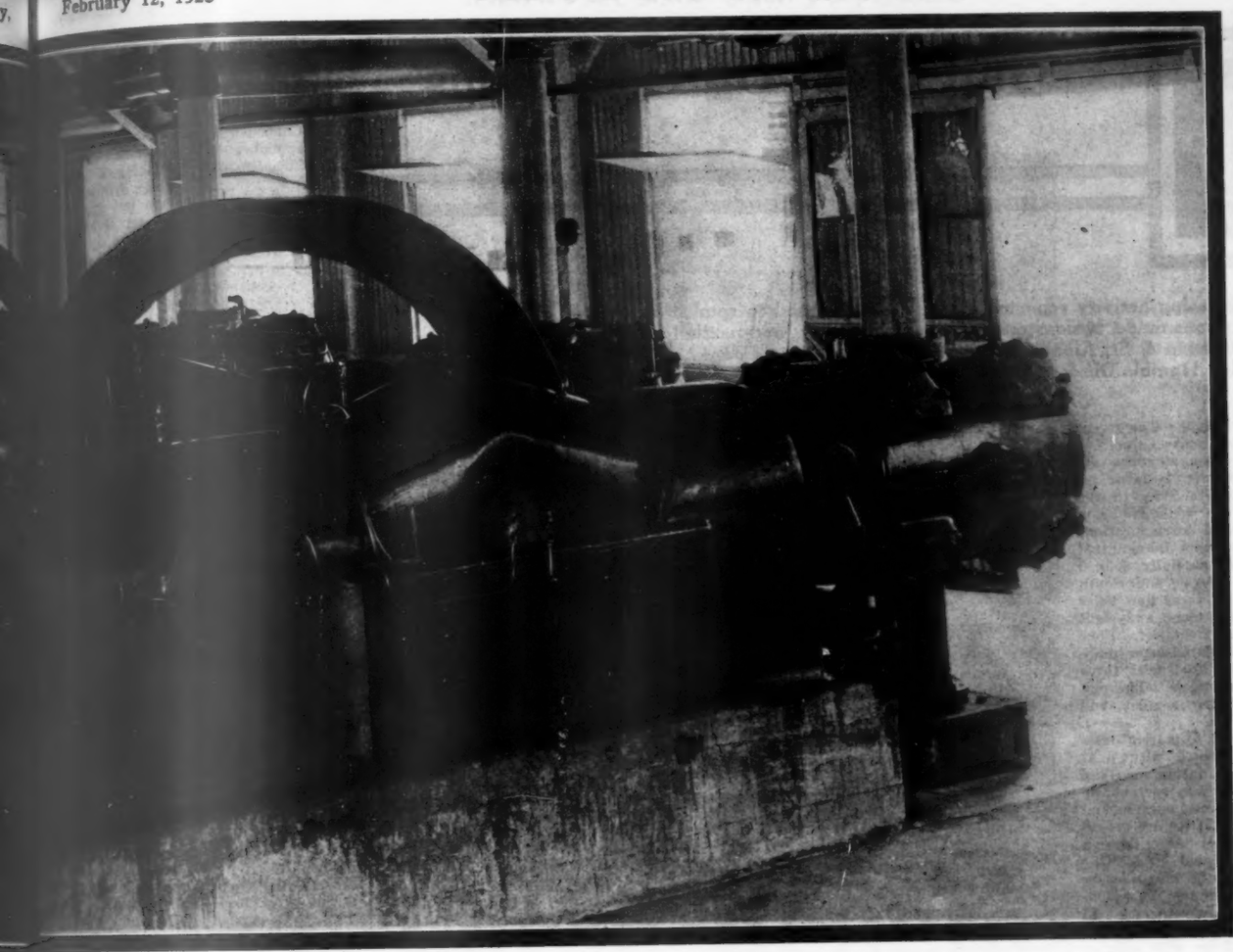

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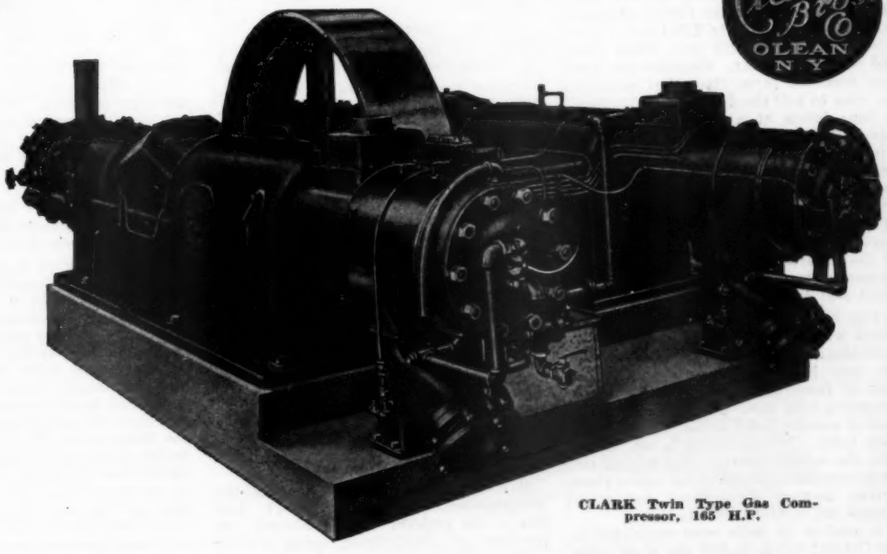

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PRESSORS

Gulf Coast Oil Operations

By P. L. McGreal

Increasing activity reported, 37 new wells rigged to spud in and dozen new locations made, besides operations in semi-pools and partially defined domes. Keselman & St. Alban's No. 3 Holbein, Jim Hogg County, starts with 3,000 bbls. Humble Oil & Refining Co. has 3,000-bbl. initial producer in Orange.

HOUSTON, Tex., Feb. 9.—The recent advance in Gulf Coast crudes, grades A and B, and the prospect of other advances in the near future, is being reflected in the increased activity in the pools. A total of 37 new wells are being rigged to spud in with a dozen locations made, not to speak of work inaugurated in the semi pools and partially defined salt domes in South Texas and South Louisiana. Fourteen of these new holes are in the Orange Pool alone and eight in the new South Liberty district. Four are starting at Hull and the same number in the Goose Creek Pool, with three in the South Louisiana pools. The rest are scattered among the smaller and older districts.

In addition scores of formation tests are scheduled to be drilled with light rotary, gasoline-driven outfits on and around prospective domes to corroborate the recordings of the seismograph and torsional balance tests. These are drilled to from 1,000 to 2,000 feet unless the gyp or salt is found at a higher level. One concern specializing in the manufacture of these small outfits has sold 28 within the past six months and has orders for 15 more. One of the major companies has ordered six, another four, still another two, and so on. Judging from the orders on file, all the major companies propose increasing their investments in these small drilling outfits as well as several individual operators. They sell for from $4,500 to $6,500 for the larger, designed to drill a 6-inch hole to 2,500 feet. This is exclusive of the drill stem, Kelly joint and other equipment. Derricks are used over some of these rigs, thus enabling the crew to pull the drill pipe in "foibles" or four joints at a time, while others merely make use of a timber, or some 6-inch jointed pipe or bolted steel rods, averaging 80 feet high by which one or two joints can be pulled at a time in order to replace the bit. It might be said that the use of these small rigs is becoming general in drilling wildcat tests in the Coastal region and for making formation tests and for coring in the Southwest counties.

The cost of operation is small compared with the usual heavy rotary rig. Individual operators and small companies say they have drilled such holes at a cost of from 40 to 50 cents per foot, compared with from $3.50 to $4 per foot with a regular heavy outfit. These were open holes. Where casing is set, naturally, the cost is greater. The cost to the major companies is somewhat above these figures, because of overhead and other charges the little fellow eliminates.

A total of 25 wells were completed in the Coastal region during the week, with 4,760 bbls. initial output. One of these, however, a 3,000-bbl. well in the Orange Pool, fell off at once. It graded as class B crude. The dry holes number 11, with 6 salt water wells. One was a gas well. At the close of the week nine holes are bailing. The Hull Pool furnished 1,750 bbls. of the total.

Two wells were completed in the Southwest fields with 3,000 bbls. new production. The latter is in Jim Hogg County. The other well was a gasser in the Laredo pools.

Estimated Daily Average Production

The estimated daily average production for the week was placed at 71,990 bbls. against an estimate of 72,460 bbls. last week. The estimated for the Southwest fields is placed at 44,205 bbls. for the same period compared with 44,195 bbls. last week. The decline in the Luling Field average partially offsets the gain in Jim Hogg County.

The estimate for each district is as follows:

Batson	1,530
Blue Ridge	625
Barber Hill	130
Big Creek	540
Damon Mound	1,195
Edgerly (La.)	465
Goose Creek	8,750
Humble	5,600
Hull	15,900
Jennings (La.)	620
Markham	90
Orange	9,850
Pierce Junction	1,275
Spindletop	980
Saratoga	1,510
Sour Lake	3,775
Vinton (La.)	5,680
Welsh-Anse La Bute (La.)	75
West Columbia	12,400
South Liberty	350
Lockport (La.)	440
*Miscellaneous	210
Total	71,990
Southwest Fields—	
†Luling	28,100
Laredo	4,165
Somerset	2,600
Calliham	505
Rockdale-Minerva	460
Jim Hogg County	8,375
Total	44,205
Grand total for week	116,195
Grand total for last week	116,655
Decrease	460

*Includes Nacogdoches, High Island, Galveston County; Stratton Ridge, Brazoria County; Big Hill, Jefferson County; Hockley, Harris County; spots in South Louisiana.

†United North and South Oil Co. credited with approximately 21,000 bbls. of the total.

The daily average in the Goose Creek Pool is the lowest in years. During 1924 it averaged from 14,000 to 11,000 bbls. The Hull Pool one year ago was averaging 18,500 bbls. per day. Orange is now about the same as this time last year. Big wells at times in this pool ran the daily average as high as 15,000 bbls., but wells there seldom hold up for any length of time. Compared with January last year the Sour Lake Pool is producing 1,000 bbls. per day less, and Vinton is about the same. The West Columbia Pool averaged 15,662 bbls. per day in January, 1924, which is a decline of more than 3,000 bbls. to the present figures. Very little changes have taken place in the averages in the Humble Pool.

Search for New Domes

Surveying these figures suggests the interrogation, what of the future? And this is the problem that confronts the producer of Gulf Coast heavy gravity crudes. At present about 50 per cent of the total grades as Class A and the balance as Class B. The A grade is the more valuable and brings a higher price. It is used for making zero cold test lub stocks, while B contains a percentage of gasoline and gas oil and then runs to fuel oil. Pierce Junction and Blue Ridge are B grades, with a percentage of the same grade in the Goose Creek, Hull and Orange pools. Theg rades are run into separate tanks for storage.

Accepting these figures gives only an average production of 36,000 bbls. per day of Grade A, for which the greater demand exists among refiners. It is reasonable to anticipate the output of the pools will continue to decline unless new districts are opened and it is in a search for new saline domes that the major companies have equipped themselves with the seismograph and the torsional balance instruments; small rotaries for formation tests and resorted to paleontology to determine uplifts, shells, fossils, etc.

West Columbia is about the only one of the more prolific deep sand domes that permits of a possible extension to the north and all that area is held by The Texas Co. Recent completions in the deep sand territory north of the Stevenson in the Humble Pool are disappointing and that section does not look as promising as it once did for development. The Hull Pool has been defined on the east and west and northwest sides, so that the southwest is the only possibility and that area is limited because it is getting too far away from the dome. The southeast extension of the Orange Pool has been expensive and disappointing in the character of the wells. The wells came in big, but soon slumped off and went to salt water. A test 1 mile northeast of production there was abandoned this week at 4,675 feet. Dry holes exist between that and the pool. Efforts to extend to the west have been futile.

South Liberty Prospects

The Vacuum Oil Co.'s well near Lockport, Calcasieu Parish, which came in last September at 3,875 feet flowing 3,000 bbls. initially, is still making 350 bbls., but three failures have been drilled since, all to lower depths than the producer. The South Liberty prospect is still an unknown quantity. The one producer there is in 12 feet of sand and has been flowing since January 1. Operators, however, consider the spot inviting and much activity is noted there. This increases as the road from the town of Liberty to the river bottom improve and more material is moving in.

The effort to find a deep sand at Spindletop proved unsuccessful last year. The Rycade Petroleum Corp. is now trying to develop a profitable deep sand in the old Markham Pool in Matagorda County. The Big Creek Pool in Fort Bend County is not up to expectations and is likely to be more of a sulphur deposit than an oil field. The Union Sulphur Co. is now developing the sulphur deposit there, moving in much of its equipment from Sulphur, La., Calcasieu Parish.

The Texas Co. has increased its wildcat activities in the Costal region to a notable degree after two years of inactivity. The company is drilling No. 1 Fisher at Barber Hill around 1,000 feet, with two rigs going at Hockley Dome. No. 1 is around 345 feet and No. 2 spudded in. Locations have been made at Davis Hill in the northern part of Liberty County and south of Nome in Hardin County. The Gulf Production Co. is also starting more wildcat work around old domes or those recently determined as domes by the use of the scientific instruments. The leasing departments of all the companies are more inclined to give ear to brokers offering acreage and are seeking out land owners in an effort to lease. During the past

(Continued on Page 108)

East Central Texas

By a Staff Correspondent.

MEXIA, Tex., Feb. 7.—Two hundred and one wells in the Wortham Field produced 76,576 bbls. in the 24 hours ending Friday at 7 a. m., an average of 389 bbls. per well. The average per well has been falling off rapidly of late. In the past seven days it has fallen from 534 bbls. per day per well, or over 27 per per cent. By the close of February it is generally believed that the production of the field will be as low as 50,000 bbls. and by that time the field will have been almost completely drilled up.

A showing of oil in a test in the Kosse district in Falls County, southwest of the Mexia Field, is one of the most interesting events of the week. C. W. Harrison and others, drilling on the J. W. Preston farm, Anderson survey, had a showing of oil and gas at 3,610 feet, and have set pipe preparatory to testing the sand. It is believed by the owners of the well that they have the same formation from which the Humphreys Oil Co.'s No. 1 Jones, drilled in Kosse in 1923, produced about 14,000 bbls. of oil in one day. The well on the Jones farm produced about 45,000 bbls. of oil and then quit altogether. Other wells were drilled thereabouts one to a much greater depth without uncovering production.

The most interesting outside wells in the Wortham area at this time are the Tri Wy Oil Co.'s No. 1 Gus Pierce, about 6,000 feet southwest of the nearest production in the field and the Humble Oil Co.'s No. 1 Jenkins, which will test the north end of the field some distance beyond the most northerly production. The Humble Co.'s test is drilling but the Tri Wy Oil Co.'s has not yet gone beyond the derrick stage. The Tri Wy Oil Co. is a Humphreys organization.

Colonel Humphreys has had the world guessing for several days as to the location of his first test of the Humphreys-Boyd Oil Co. on the Bazette structure, near Kerens, Navarro County. The company has several thousand acres in that area. A water station has been established on the Trinity River which will provide the water for drilling operations. Colonel Humphreys is confident that the Bazette structure contains a deposit of oil fully up to that contained in the Mexia and Powell areas.

Recent Completions

The following completions in the Wortham Field are the record since Tuesday. The comparatively small initial production of most of the wells is their chief characteristic:

Simms Oil Co. and Marland Oil Co.'s No. 3 Hackney, sand at 2,985-3,005 feet, 150 bbls. the first 24 hours.

Godley Oil Co.'s No. 2 Manning, sand at 2,985-3,005 feet, 200 bbls.

Humphreys-Boyd Oil Co.'s No. 7 Ferguson, sand at 2,957-3,017 feet, 800 bbls.

Humphreys-Boyd Oil Co.'s No. 18 Ferguson, sand at 2,962-3,017 feet, 300 bbls.

Atlantic Oil Producing Co.'s No. 2 Simmons, sand at 2,928-83 feet, 104 bbls. the first 14 hours.

Same company's No. 2 McCorkle, sand at 2,990-3,017 feet, 150 bbls.

Gulf Production Co.'s No. 4 W. D. Wilson, sand at 2,920-49 feet, 150 feet of oil in the hole.

Same company's No. 5 W. D. Wilson, sand at 3,022-43 feet, 1,150 feet of oil in the hole.

The Texas Co.'s No. 2 Chancellor, sand at 2,989-3,002 feet, 500 feet of oil in the hole.

Same company's No. 2 Watson, sand at 2,976-96 feet, 124 bbls.

Humble Oil & Refining Co.'s No. 5 Manning, sand at 2,998-3,012 feet, 82 bbls. the first hour.

Same company's No. 2 Ferguson, sand

(Continued on Page 102)

Rock Island Tractor Winch Model 70

Rear view, showing tractor backed up to the well, anchored from the derrick, pulling 2,000 feet of rods direct from tractor winch over the crown block.

Note comfortable position of operator with unobstructed view of his work

The large drum insures long life to the line, and the two large brakes give perfect control of the load at all times.

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After January 15, 1925, the Rock Island "Heider" Tractor Winch, the Rock Island No. 70 Tractor Winch and the Nos. 51 and 56 Pumping Units with extras and repair parts will be handled by

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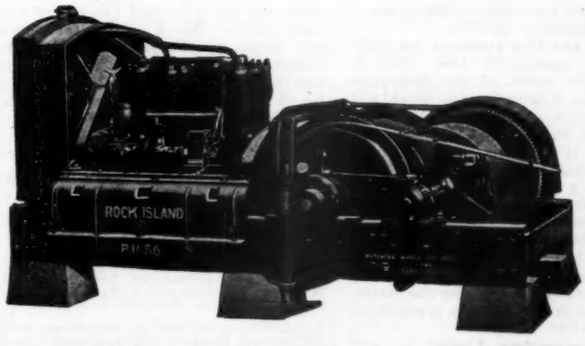

Rock Island Pumping Engine—PU 56, a new heavy duty 30-35 h. p. pumping outfit. This machine is equipped with the **patented** Rock Island friction transmission, large four cylinder motor, and is for pumping, pulling rods and tubing, bailing and handling a string of tools.

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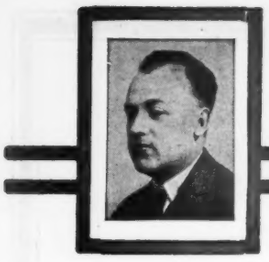

California Field Operations

By L. P. Stockman

Associated Oil Co.'s No. 9-A Lloyd, Ventura avenue, increasing production. Pacific Petroleum Co.'s No. 2 Athens starts at 1,200 bbls., but drops to 725 bbls. Associated Co.'s No. 6 DeFrancis, Dominguez, makes 2,612 bbls. and Shell Co.'s No. 2 Manuel 1,413, exceeding all southern initial output.

LOS ANGELES, Cal., Feb. 7.—The Associated Oil Co.'s No. 9-A Lloyd, in the Ventura Avenue Field, the largest well ever finished in this field, looks like it will increase production instead of declining. The well made 4,555 bbls. of 29.2 gravity oil from sand at 5,150 feet at the start. The Associated has three other drillers on this lease, No. 18 at 2,335 feet, No. 17 at 3,759 feet, and No. 16 at 5,280 feet, a deeper well than No. 9-A and credited with 110 feet more of oil sand.

One new well was added at Rosecrans during the past week when the Pacific Petroleum Co. turned No. 2 Athens loose from 4,957 feet. It started off flowing 1,200 bbls. but a gauge taken the following day showed the output for the second 24 hours to be 725 bbls., the oil testing 35.2 degrees and showing a cut of 4 per cent. This, the first completion of the Pacific Petroleum at Athens, was finished with a 4¾-inch oil string carrying 460 feet of 60 mesh screen. The company has erected a rig for No. 3 Athens in the northern part of the field and will probably spud in during the coming week. The Sentinel Oil Co.'s No. 1 Brown started gassing for the second time during the latter part of the week and is making about 75 bbls. of salt water and 2,000,000 feet of gas. The bottom of the hole is 5,410 feet and, while there is no oil present, there is a slight possibility that crude production may yet be secured. If the company is not successful in finishing an oil well, a casinghead plant will be erected to take care of the gas. The Sentinel cemented No. 3 Athens at 4,703 feet and cored a gray sand in No. 2 at 4,839 feet. The latter two wells, however, are more favorably located than No. 1 and look good for production. The showing made by the Sentinel's No. 1 Brown is of particular importance at this time since it is about half way between production and the Shell's wildcat, No. 1 Leonis, northwest of the field.

The Shell and Pan-American are drilling on the assumption that there is another uplift north of the Rosecrans structure but, judging by the depth and relative position of the Sentinel's No. 1 Athens, this theory does not seem as plausible as it did some time ago. The Shell is making hole in No. 1 Leonis at 5,196 feet in a hard sandy formation and, since the company has not had the faintest encouragement since spudding in, this hole looks like a duster. The outcome of the Pan-American's No. 1 Anderson, since it is an offset to the Shell's Leonis, will practically be decided by the latter, as the former is held up with a redrilling job at 3,524 feet.

Northeastern Limits

The Standard has defined the northeastern limits with a 5,874-foot hole in No. 1 Cowan. The company is temporarily held up with a stuck core barrel, which became lodged in the hole early in the week, but the crew is circulating with oil and expects to be in a position to go ahead soon. The Union has a marker in No. 1 Gordon, which is drilling in a brown shale at 6,301 feet. In the southern part of the field, the St. Helens has reached a depth of 4,940 feet in No. 1 Rowley without developing production and indications are somewhat discouraging. In the southwestern part of the field, the General Petroleum has just about reamed out No. 1 Amestoy, drilled to 6,666 feet, and will run in a string of 6¼-inch tomorrow. This hole has only a very small chance of being finished as a producer. The Julian Petroleum is reaming both No. 1 Athens ,drilled to 4,921 feet, and well No. 9, carried to 4,775 feet. A rig for No. 2 has been erected and, since it is being rigged up, actual drilling should be started shortly.

The Petroleum Midway (California Petroleum) started actual work on two new wells, No. 1 Fox Community, now down 980 feet, and No. 1 Kreitz Community, which shows 1,511 feet of hole. The spudding in of these two wells gives the Petroleum Midway six drilling jobs under way and one producer, No. 1 Colby doing 150 bbls. a day. The company's deepest hole is No. 1 Folsom at 4,569 feet, followed by No. 1 McCormick at 4,097 feet, No. 1 Baskin at 4,066 feet and No. 1 A. Ducommon at 3,685 feet.

The Marine Oil Co. has the honor well of the field, its only producer in this area holding up remarkably well. The daily output yesterday was 1,275 bbls. of 35.6 gravity oil, which cut 2 per cent. The action of this producer in increasing its output, rather than diminishing, is remarkable in that it is the only well in the field which has displayed this tendency over any period of time. The well, of course, has no others pulling on the sand in the immediate vicinity and, as was stated, when originally finished, it should not show any great change for some time. The Marine cemented No. 32 above the oil sand at 4,385 feet and picked up the pay in No. 33 at 4,243 feet. No. 34 is just getting under way at 2,700 feet but the company expects to have it on production, barring mechanical trouble, before March 15.

The Barnsdall is in the oil sand in No. 3 Rosecrans at 3,947 feet and is getting ready to run in a 6¼-inch oil string, which will carry around 115 feet of 100-mesh screen. No. 4 on the same lease also picked up the pay and is standing cemented at 4,008 feet. The company has temporarily suspended operations on No. 1 O'Dea and is testing the water shutoff in No. 3 at 3,860 feet. No. 2 O'Dea at 4,142 feet is scheduled for a cleanout job. The Twin State Oil Co. has erected a rig for No. 1 Hoferkamp and this concern, a subsidiary of the Sun Co. of Philadelphia, will start immediate work.

Dominguez

Two new wells were added to the field's list of producers at Dominguez during the past seven days, the Associated finishing No. 6 De Francis and the Shell, No. 2 Manuel. The former's new producer made 2,612 bbls. of 29.8 gravity oil on its first 24-hour test, while the latter's No. 2 Manuel tanked 1,413 bbls. of 30.1 gravity oil during the same period. No. 6 DeFrancis, drilled to 4,251 feet, was finished with a 4¾-inch oil string, while No. 2 Manuel was completed at 4,258 feet and finished with a 6¼-inch oil string. The completion of No. 6 De Francis leaves the Associated with but one driller, No. 5, temporarily held up with a fishing job at 4,360 feet. The company should successfully overcome this difficulty and begin making new hole in a few days. The Shell, however, has several drillers on the Reyes, Manuel, Hellman and Childs leases. The Birch Oil Co. took a core at 6,375 feet and concluded it was useless to proceed further with its wildcat. This hole did not have an outside chance of securing commercial production. It is only a short distance from the duster drilled by the Chase Oil Co. several months before this attempt was spudded in.

Torrance

There were more wells put on production at Torrance during the past week than in any other field, but their combined initial daily production did not equal the output from either one of the two completions recorded at Dominguez. As a matter of fact, the initial production credited to the two new wells finished at Dominguez exceeded the combined initial production of all other wells put on production in the Southern California major pools during the week. The largest well added at Torrance was the Standard's No. 33 Marble fee, which, when put on the beam, pumped 138 bbls. of 20.2 gravity oil, which cuts 4 per cent. It was drilled to 3,750 feet and finished with a 6¼-inch liner carrying 450 feet of shop perforated and 2,700 feet of 2½-inch tubing. In drilling this well, the Standard followed its latest policy in this field by using only one string of casing and a liner. In No. 33 Marble fee, 3,270 feet of 8⅝-inch and 675 feet of 6¼-inch was the only pipe used.

The LeMohn Investment Co. completed its second Torrance producer by putting No. 3 Bernard on the beam at 3,820 feet after finishing it with a 4½-inch liner measuring 275 feet, 222 feet of which was perforated. In addition to the liner, 3,525 feet of 8¼-inch and 3,000 feet of 6¼-inch was used. The well started off pumping 122 bbls. of fluid, 45 per cent of which was water, but it cleaned up somewhat the following day and is listed as a 76-bbl. pumper, the oil testing 18.3 degrees and showing a cut of 6 per cent.

The Superior Oil Co.'s No. 57 Torrance was finished doing 121 bbls. of 17.8 gravity oil which cut 2 per cent, and, although this well is experiencing sand trouble, it is thought a few days' production will overcome this handicap. The company drilled to 3,800 feet and finished with a 6¼-inch oil string carrying 300 feet of 60-mesh screen and 2,980 feet of 3-inch tubing.

General Petroleum Operations

The General Petroleum Co. got a very small, unsatisfactory well when No. 5 Carson was put on the beam at 3,375 feet after being finished with a 6¼-inch oil string, including 450 feet of 50 mesh screen. The first full day's pumping was 42 bbls., the oil testing 15.1 degrees and showing a cut of 20 per cent. The cut has been substantially reduced since completion and it is thought a further improvement will be noted after the well has been put on production for several days. The General Petroleum is trying to recomplete No. 20 Poggi, which is being bothered with sand, but so far has had very little success. The company has four drillers on this lease and, judging by their depths, Nos. 1, 2, and 4 should be on production shortly. Only small pumpers, however, are expected upon their completion. No. 1 is going ahead at 3,450 feet, No. 2 at 3,578 feet, No. 3 at 1,600 feet and No. 4 at 3,575 feet. Rigs have been erected for Nos. 5, 6, 7, and 8 but it is not believed more than one of them will be spudded in unless some of the present drillers are successfully finished as commercial producers.

The Consolidated Mutual put No. 1 Campbell on the beam after plugging back from 3,822 feet at 3,785 feet and finished what looks to be at least a small well. The oil has not yet cleaned up but, judging by the sump production, it should be good for 25 bbls. a day, if the water can be exhausted by pumping.

The Chanslor-Canfield Midway Oil Co. is still working with its deep test, No. 1 Francis, drilled to 6,536 feet, and is plugging back by stages to determine if there is anything in the upper zone. The company is also plugging back No. 2 Dominguez and will make a test within a few days of the plug set at 4,070 feet. The Lora J. Oil Co.'s deep hole, put on a pumping test at 4,590 feet after being plugged back from 4,780 feet, is still pumping water, which at times has a scum of oil and, although it was thought for some time the water could be exhausted by pumping, it does not look as though this will be possible. The Shell has reduced its drilling work at Torrance to one hole and, with the exception of No. 3 Torrance, going ahead at 2,800 feet, and a few cleanout jobs, the company is not doing any development work.

Long Beach

The Liberty Oil Syndicate recompleted No. 1 Barbour at Long Beach after plugging back from 4,960 feet to 3,310 feet, but only a small pumper was secured, the maximum output being 45 bbls. of 14.2 gravity oil, which is cutting 50 per cent water. This was the only well actually put on production during the week, although the Shell finished No. 23 Alamitos and is pumping to sump. The Fred B. Foster Co. has redrilled and deepened No. 55 to 4,405 feet and is

(Continued on Page 98)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

H. C. Folger, January 27, Philadelphia, refined	75,960
Agwiworld, January 28, New York, crude	75,978
Byron D. Benson, January 29, New York, crude	82,863
Agwilake, January 29, Boston, crude	95,956
J. C. Donnell, January 30, Philadelphia, crude	103,054
W. S. Rheem, January 30, New York, crude	95,197
H. M. Storey, February 1, New York, crude	106,399
Samuel Q. Brown, February 1, New York, crude	75,118
Coastwise	
H. M. Storey, January 26, Richmond, crude	104,111
El Segundo, January 26, Richmond, refined	31,693
Washtenaw, January 26, San Francisco, crude	22,140
Stockton, January 29, Everett, fuel	69,180
U. S. Tanker Ramapo, January 30, San Francisco, fuel	62,488
Los Alamos, January 30, Seattle, refined	37,118
W. S. Porter, January 31, Linnton, fuel	51,130
Los Angeles, January 31, Martinez, crude	77,213
W. S. Miller, February 1, Richmond, crude	71,940
Cathwood, February 1, Martinez, crude	73,673
Exports	
Mina Brea (Br.), January 27, Vancouver, crude	46,140
F. H. Hillman, February 1, London, refined	112,716
Acasta (Br.), February 1, Balboa, fuel	45,726
Tahchee (Br.), February 1, Shanghai, fuel	66,302
From Ventura	
Frank G. Drum, February 1, Avon, crude	73,481
From Port San Luis	
Oleum, January 27, San Diego, fuel	32,870
D. G. Scofield, January 30, Wellington, fuel	75,687
From San Francisco	
Kewanee, January 26, Seattle, refined	28,911
R. J. Hanna, January 26, Baton Rouge, crude	77,886
Charlie Watson, January 27, Gray's Harbor, refined	16,830
El Segundo, January 28, Willbridge, refined	32,860
S. C. T. Dodd, January 30, Point Wells, refined	77,911

For steam-still installations—

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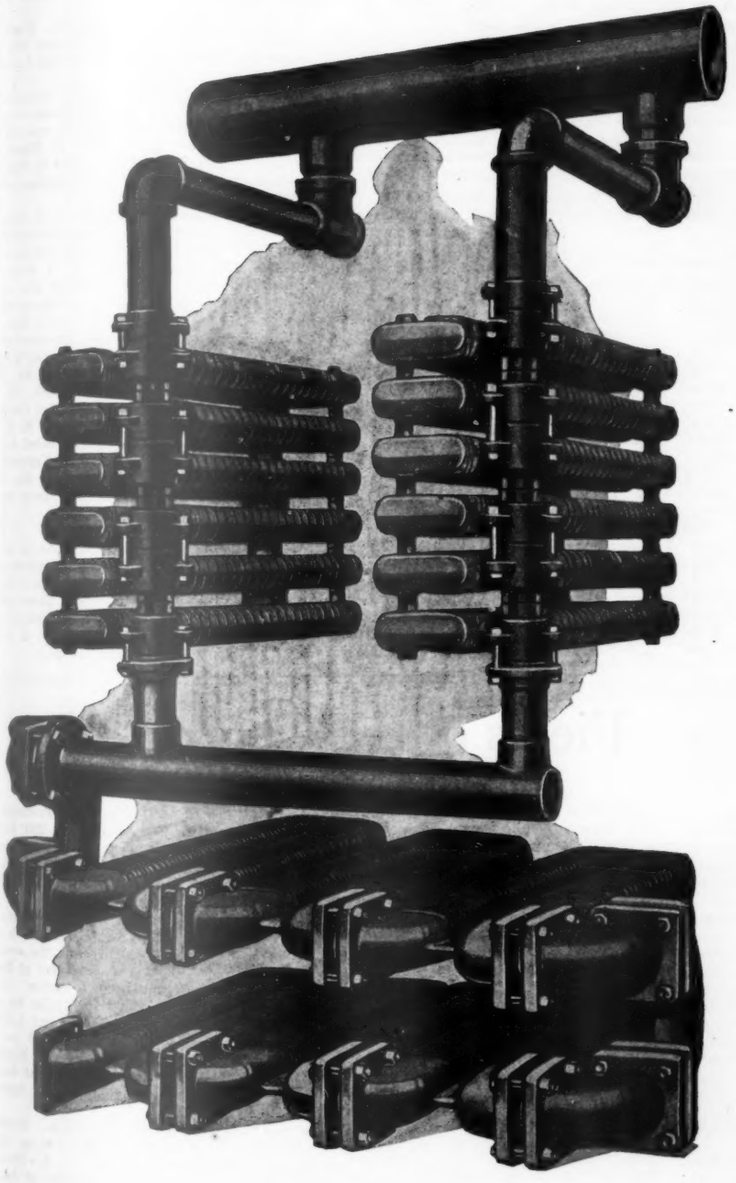
and
STERLING RUN-DOWN SECTIONS



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Kentucky—Tennessee

By Vern T. Whitney

T. A. Sheridan completes second big well in Davenport Pool, Warren County, Kentucky, it being good for 300 bbls. Completion in Richpond area, same county makes 60 bbls. Fannis Creek well, when deepened, pumps 7 bbls. per hour. Jackson County wildcat is dry. Drilling activity to increase.

BOWLING GREEN, Ky., Feb. 9.—The past week in the Kentucky Field shows 29 completions, 11 failures, 3 gassers and 15 producing wells with a combined initial yield of 482 bbls. Compared with the previous week this shows 1 more completion, 5 less producers, 191 bbls. increase in flush production, 3 more gassers and 3 more dry holes.

The wells were distributed by counties as follows:

County—	Comp.	Wells	Prod. Prod.	Dry	Gas
Barren	6	5	40	0	1
Warren	5	2	360	3	0
Allen	5	1	10	4	0
Lee-Owsley	3	2	24	1	0
Lawrence-Johnson	3	2	26	1	0
Johnson-Magoffin	2	2	16	0	0
Cumberland	2	1	6	0	1
Owensboro district	1	0	0	1	0
Breathitt	1	0	0	0	1
Jackson	1	0	0	1	0
Total	29	15	482	11	3
Last week	28	20	291	8	0
Difference	1	5	191	3	3

Western Division

Two shallow gushers in Warren County, the deepening of two wells in Cumberland County and the steady development going forward in Barren County, features the week in the Western division of the Blue Grass State.

In the Davenport Pool, west of Bowling Green, in Warren County, T. A. Sheridan brought in his second gusher, No. 6, on the Georgiana Davenport place estimated at 300 bbls. naturally, at a total depth of 469 feet. It is 100 feet northwest of No. 4, which was estimated from 500 to 2,000 bbls. No. 3 Davenport is dry in the shallow sand as is No. 1 Jenkins across Barren River from the G. Davenport. Nos. 5, 7 and 8 are drilling.

In the southern part of Warren County, Roy W. Hogan's No. 4 Ben Ford, in the Richpond area, is good for 60 bbls. from the Mississippian lime topped at 458 feet. This well the third day, however, put 210 bbls. in tankage. It was drilled to offset No. 1 Shannon and No. 12 Smith.

Teague and associates' No. 1 Manning, offsetting the Perkins farm, in the Glen Lily sector was dry and abandoned at 1,120 feet, approximately 106 feet below the Black shale.

Cumberland County

Cumberland County operators have been marking time waiting for a rise in the market. Considerable work is being planned for the near future and the operators already in the field are making preparations for work ahead when conditions improve further.

At Fannis Creek, the Vedder Oil Co. deepened its No. 1 J. T. Tompkins to 485 feet, second Sunnybrook, where it started off at 5 bbls. an hour on the jack and increased itself until at this writing it is pumping 7 bbls. per hour. A tubing packer is being set just above the sand to test out a theory relative to isolating barren porous structures above the pay. No. 2 on this farm, abandoned back in 1909 by the New Domain Oil & Gas Co., is pumping 8 bbls. daily after being on the jack seven months.

Completes Pipe Line

The Vedder Oil Co. has completed the laying of its pipe line to Sulphur Creek to connect with the Paragon line and is now running oil. The line is 4½ miles in length and runs with the road from Fannis Creek, through the Frogue to Sulphur Creek pump station, and makes pipe line facilities available to operators in the territory adjacent. This is virgin territory as there has been but one test drilled between Fannis Creek and Sulphur Creek and it was only drilled to the Pencil Cave. With the deeper pays on Sulphur Creek it is believed that this section will come to its own shortly.

At Sulphur Creek, W. S. Raydure's No. 2 Mrs. Coop is flowing 100 bbls. per day at 790 feet in a sand below the Pencil Cave while it is being deepened. W. S. Raydure and the McClintock Oil Co.'s No. 1 Hood is a good gasser at 840 feet. The Pencil Cave was encountered at 560 feet and the hole was finished at 885 feet. General Carter, General Morris and Colonel Combest are making arrangements to drill three wells on the Dimple Payne, adjoining the Hood, to the deeper pays now being found in this northern extension of the Sulphur Creek Pool. The Ves Nun of Hook and associates is showing for production in the second Sunnybrook sand and serves to extend this area two locations to the north of the Coop. The well is now shut down with a fishing job.

Wilcox Brothers' No. 1 Davidson will be drilled the coming week to the deeper pays that are found in this area. It is now shut down at 250 feet below the Cave.

At Bear Creek, the Oil Fork Development Co.'s No. 1 F. F. Smith is showing for 6 bbls. from the Sunnybrook sand.

At Goose Creek, the Cumberland Oil Syndicate's No. 1 Williams is shut down on the top of the Second Sunnybrook sand waiting on a drilling stem.

Barren County

A leasing campaign as well as a drilling campaign is on in Barren County. Companies like the Carter, New Domain, Henderson and Wood are getting all available acreage lying to the north of the Hall Baker Pool, in the vicinity of Hiseville and Goodnight, while some of them are leasing acreage in Metcalf County just north of the Barren line.

Six wells were finished last week, three each in the Emeroy-Moore and Hall Baker pools. In the Emery-Moore sector, southwest of Glasgow, Wiggins & Gillespie's No. 12 B. Scott tested 12 bbls. at 518 feet, 185 feel below the black shale; Star Oil Co.'s No. 5 Free pumped 4 bbls. at 552 feet and the Henderson Oil Co.'s No. 4 Burris started off at 8 bbls. at 546 feet.

The Wood Oil Co.'s No. 2 John Church in the Hall Baker Pool, just north of Glasgow, is estimated at 12 bbls. at 576 feet, approximately 155 feet below the black shale; the Consolidated Gas Co.'s No. 1 Houck, adjoining the Evans, made 4 bbls. on power at 568 feet; same company's No. 1 Rogers is a small gasser at 426 feet.

Drilling Activities

Emery-Moore Pool: Star Oil Co. is drilling No. 6 Free, No. 6 Starr and No. 14 Ritchie; Wiggins & Gillespie's No. 8 Scott, south of No. 7, spudding; Fred Moore's No. 5 Travis, spudding; Leaden Oil Co.'s No. 2 Oakes is a rig; Shriver's No. 1 Burton is shut down on top of the second pay with a good showing of oil; Stafford & Rhoedener's No. 3 Neeley looks like a duster in the deep sand; same parties' No. 1 Price heirs, showing for a small well at 430 feet; same parties and Scott's No. 2 Lewis, drilling at 230 feet; Henderson Oil Co.'s No. 5 Burris, spudding; Carter Oil Co.'s No. 3 Jess Wininger and No. 3 Gooden, drilling in; Nelson and others' No. 2 Dossey, drilling at 210 feet.

Hall Baker Pool: Wood Oil Co. drilling No. 3 John Church and No. 4 Will Church at 185 and 65 feet, respectively; Consolidated Gas Co.'s Nos. 3 and 4 Hall Baker, spudding; No. 1 Turner, spudding; McCandless and others' No. 1 Horace Church, shut down on top of the pay; Harrington & Norris' No. 2 Evans, drilling in the black shale; Smith & Sons' No. 1 Webb, on Beaver Creek, drilling at 212 feet; Sansom & Co.'s No. 1 Ben Myers, east of the Evans, drilling at 92 feet; Jackson and others are spudding in No. 1 Rich to offset the Evans well.

Gorby Pool: L. J. Emery, Jr., & Sons' spudding No. 4 Greer; Big Jack Oil Co.'s No. 1 Hatfield, drilling at 200 feet; Porter and associates' No. 2 McLaughlin, drilling at 73 feet; T. L. Gorby's No. 3 Lessenberry's No. 3 Cassidy; No. 3 Taylor and No. 1 Bybee are rigs.

Other districts: Stafford & Maxey's No. 2 Ritter Brothers, shut down at 430 feet; L. J. Emery, Jr., & Sons' No. 1 C. W. Bellamy, drilling at 500 feet; same parties' No. 1 John Wells, spudding.

Hammerly and associates of Louisville have let a contract for the drilling of a 1,500-foot hole on the John A. Dood farm, lying between Gas Hollow and the Emery-Moore Pool. This test will be of great importance and will be watched with the keenest of interest by all Barren County as well as the oil fraternity of the entire State.

Allen County

Allen County had a poor week, four out of five completions being dry. The producer is credited to McCandless and others of Pennsylvania who got a 10-bbl. started on the Carver lease, in the Gainesville Pool, at 320 feet. Twenty feet of pay was shot with 30 quarts of nitro.

In the vicinity of Meador, Albert Davis' No. 1 and 2 Will Gardner were both dry at approximately 97 feet below the black shale.

In the southwest area, unknown parties' No. 8 on the Carpenter-Dent, adjoining the famous Mitchell, was dry in the deep pay. No. 1 C. C. Hinton, adjoining the Lyle farm, drilled by Eastern operators was dry and abandoned at 106 feet under the shale.

In the Owensboro district, I. N. Hasless got a duster in his second attempt on the W. T. Bickett farm in the Jett sand.

The Mosley Oil Co.'s No. 1 Mosley was shut down in the Jackson sand at 700 feet; C. A. Leeper is moving a rig to No. 1 location on the Beaucamp farm. It is 400 feet east and 400 feet south of No. 1 J. S. Collier; C. E. Daugherty is still held up in completing his No. 1 Crowe on account of a fishing job. No. 2 was drilling at 350 feet; Panther Creek Oil Co. is moving a rig to the R. M. Miller farm to drill No. 12 located 400 feet south of No. 11. The Kentucky Oil Co. is moving a rig over No. 2 Amanda Stewart to deepen it from the Jett sand to the Barlow.

Eastern Division

Very little work is being done in the eeastern tier of counties due to inclement weather and also to the conditions of the roads leading to the fields. There are however a number of wildcat operations underway holding the attention of the

(Continued on Page 94)

Fields of the Central West

By Whit

FINDLAY, Ohio, Feb. 9.—The Central West division made a rather small showing, there being but few completions. The failure to complete more wells is due to the weather. In the central Ohio area the large gas concerns are doing the bulk of that work and keep the drills moving practically all the year round, with the exception of May, when work stops to some extent for a very short spell and is then resumed.

In the Lima Field of northwestern Ohio, but six completions were reported for the week, the wells being rather light producers. Two were dry and the other four only showed a combined production of 23 bbls.

In Portage Township, Wood County, Mattie S. Rouse and others' No. 22 on the Rouse farm, Section 19, proved a dry hole at a total depth of 1,610 feet. The well is in the southeast corner of the farm and east of the Ohio Central Railroad. In Plain Township, Schmidt, Hammon & Huston are drilling a second test on the Harley Avery, Section 22. The Ohio Oil Co. is drilling No. 49 on the Northwestern Ohio Natural Gas Co.'s farm, same section, and Maxwell and Harkness are drilling No. 32 on the H. Hatfield, Section 7. In Liberty Township, the Ohio Oil Co., is drilling No. 1 on the Bordner heirs, Section 5, and Hulse & Kundtz are at work at No. 3 D. W. Levers, Section 4. In Perrysburg Township, Lew W. Johnson has a rig in for No. 1 on the Deloy Speck, Section 32.

In Jackson Township, Sandusky County, B. J. Rineboldt's No. 4 on the northwest corner of his own farm, Section 30, pumped 10 bbls. Top of Trenton was found at 1,251 feet and drilled 49 feet in. In Woodville Township, Jake Smith's No. 1, located 200 feet from the north line and 800 from the east line of the Fred Neihausmeyer, in the southeast quarter of Section 15, was a duster at a depth of 1,304 feet.

In Harris Township, Ottawa County, in the Elmore Field, the River Oil Co.'s No. 5, located 1,200 feet from the south line and 700 from the east line of the Ernest Bushman farm, Section 14, jumped 9 bbls. at 1,304 feet. The Zorn-Hornung Oil Co.'s No. 1, located 1,250 feet from the north line and 250 from the west line of the Harman Minke farm, in the northwest quarter of Section 13, pumped but 1 bbl. at a depth of 1,318 feet.

In Mississinewa Township, Darke County, F. Hunting Clark's test on the southwest corner of the O. L. Black farm, in the southeast quarter of Section 4, pumped 3 bbls. Top of Trenton found at 1,228 feet and drilled 40 feet in the sand.

Indiana Field

Only one completion was reported from Indiana during the week and that was from the southwestern section in the Princeton Field. This was Joe Young and others' advance well on the northwest corner of the C. Stickler farm, Section 25, Decker Township, Knox County and in the southeast quarter of the Section. The well proved a dry hole after the drill went to the depth of 1,060 feet.

Last week a report was made of prospects for the finding of a commercial oil field in the vicinity of Brewersville, in the northern part of Jennings County, Indiana. This field already has commercial natural gas. The well that

(Continued on Page 58)

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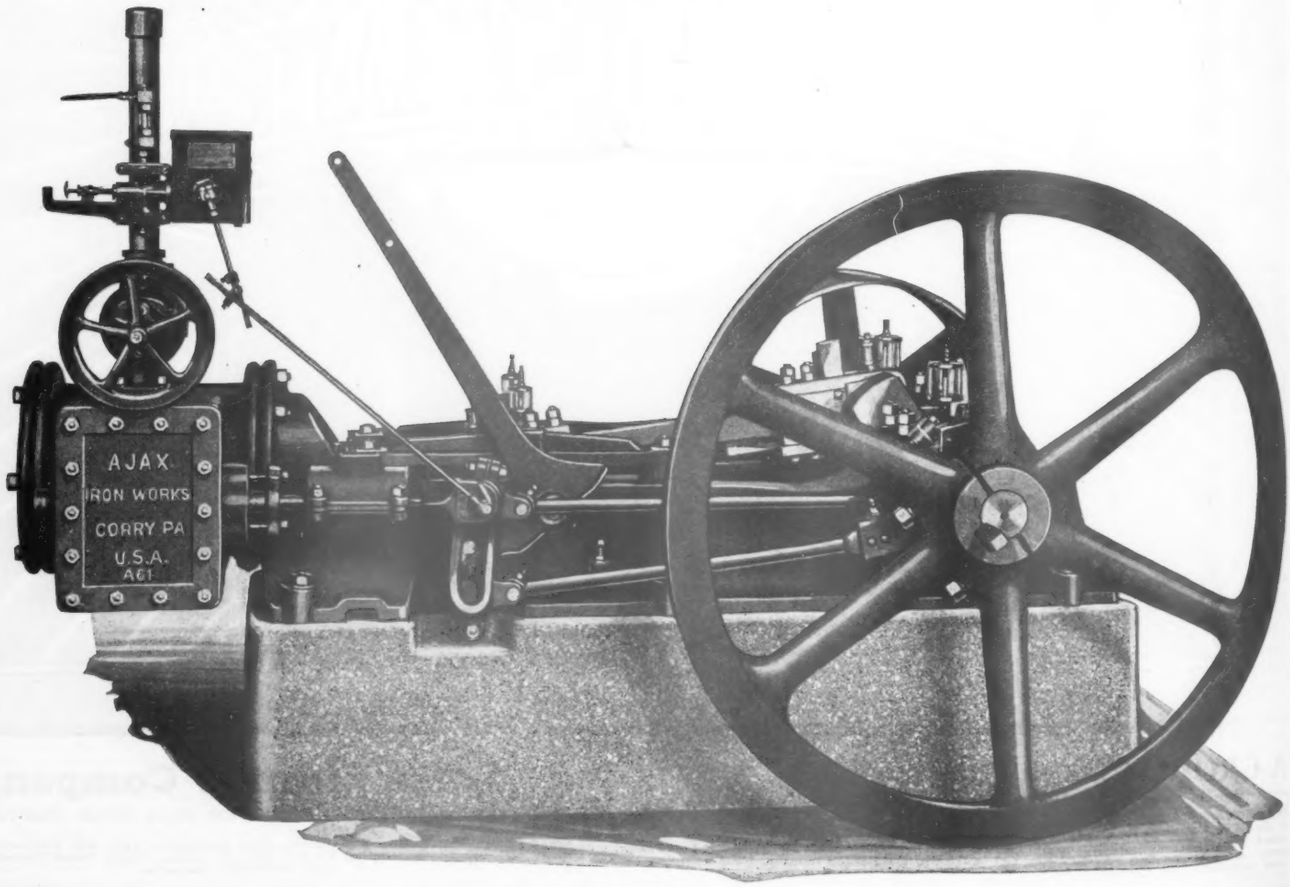

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Ajax Replacement Parts

Pennsylvania-West Virginia

By D. S. Wakenight

Snow and zero weather make week worst of winter. Best completion in deep sand, southeastern Ohio, Whitehill & Zahniser's No. 3, Bowling Green Township, Licking County, making 55 bbls. United Fuel Gas Co. gets 10-bbl. well in Roane County, West Virginia. Andrew Carl and others 25-bbl. well.

PITTSBURGH, Pa., Feb. 9. — The week was the most unfavorable for field work experienced this winter. The ground for the greater part of the week was covered with more than a foot of snow and the mercury hovered around zero. The completions were few and none large or important as to location. The deep sand territory in southeastern Ohio was credited with the best producer. It is Whitehill & Zahniser's No. 3 on the George M. Bowers farm, located in Bowling Green Township, Licking County. The well was drilled through the Clinton sand 10 days ago but not shot until last Friday when it responded with a production of 55 bbls. the first 24 hours.

Shallow Territory

In Liberty Township, Washington County, Archer & Co. have a very light pumper at a test on the Frank Schenkle farm, in the Big Lime formation. In Newport Township, Washington County, Charles Daily and others have a dry hole in the first Cow Run sand at a test on the O. O. Newlen farm. In Section 33, Pleasant Township, Perry County, C. L. Bullock & Co.'s No. 16 on the John Grannan farm is good for 8 bbls. a day in the Berea grit.

Light Pumper in Perry

In Section 20, Reading Township, Perry County, Elder Griggs & Co. completed a test on the Samuel Barnes farm in the same formation. It is a 10-bbl. pumper, 1,200 feet west of the Planet Oil Co.'s second test on the S. B. Dittoe farm. In Liberty Township, Washington County, Section 19, W. M. Huntsman & Co. have a light pumper in the first Cow Run sand at a second test on the Ora Erbs farm. In Section 18, Madison Township, Perry County, the Carter Oil Co. completed and shot in the Clinton sand a test on the E. W. Skinner farm. It is a gasser good for 700,000 feet. In Section 2, Killbuck Township, Holmes County, 1½ miles northwest of Killbuck, a test on the Joseph S. Jackson farm was completed in the Clinton and Medina sands. Nothing was found in the Medina sand, but it is good for 500,000 feet in the Clinton sand. In Monroe Township, Muskingum County, the Ohio Fuel Gas Co. is drilling at 4,220 feet on the William Snell farm. This is to be a deep test. In Adams Township Guernsey County, the same company is down 600 feet at what is to be a deep test on the Mary E. Clark farm.

Starting Test Wells

In Section 17, Madison Township, Perry County, the Carter Oil Co. has the rig completed for a test on the I. J. McCullough farm. In the northeast quarter of Section 14, Pike Township, the Paxton Oil Co. started to drill on the Edgar Denman farm. This location is 2½ miles southeast of New Lexington. In Lot 15, Madison Township, Licking County, Alvin C. Spindler & Co. are drilling a second test on the O. C. Irwin farm. In Lot 10, Hanover Township, the Edward H. Everett Co. started to drill on the T. H. Walent farm. In Section 13, Pike Township, Coshocton County, the Carter Oil Co. has rig timbers at a location on the Samuel Gardner farm. In Section 7, Cass Township, Muskingum County, the Trinway Oil & Gas Co. has spudded in at a second test on the Lloyd Fawcett farm. In Washington Township, Monroe County, E. L. Yeager has started to drill on the Simon Cline farm.

In Newport Township, Washington County, Charles Dailey and others drilled a test on the O. O. Newlon farm through the first Cow Run sand and dry in this formation. It will be drilled to the lower sands. In the same township and county Frank Goddard and others completed through the same formation a second test on the Ruth Uppole farm, not good for more than 2 bbls. a day. In Independence Township, Washington County, the First National Bank of Marietta started to drill on the John A. Harlan and Louisa L. Mendenhall farm.

West Virginia

On the north fork of Fishing Creek, Grant district, Wetzel County, the Hope Natural Gas Co. has cleaned out and shot its old No. 1 on the D. S. Cox farm, good for 4 bbls. a day. In DeKalb district, Gilmer County the same company has drilled through the Big Injun sand on the W. G. Bennett farm. It is a gasser good for 350,000 feet. In Carroll district, Lincoln County, the Laurel Hill Development Co. has a gasser in the Big Injun sand at No. 3 on the Edward Porter farm. In McComas district, Cabell County, the Commercial Gas Co.'s test on the Millard Adkins farm is a gasser in the Big Injun sand. The Hope Construction & Refining Co.'s test on the W. H. H. Douglass farm in New Milton district, Doddridge County, is a gasser in the same formation.

Fourth Sand Gasser in Harrison

In Sardis district, Harrison County, the Hope Natural Gas Co. has a fourth sand gasser at a test on the C. L. Griffin farm. In Clay district, Monongalia County, the Manufacturers' Light & Heat Co. has drilled No. 5 on the R. S. Thomas farm into the fourth sand and the hole filled up 1,800 feet with fluid. In Libery district, Marshall County, the same company's No. 4 on the Lindsey Burley farm is a fair gasser in the Gordon sand. In the same district, the Hope Natural Gas Co. drilled to a depth of 3,450 feet and abandoned its test on the G. N. Yoho farm. In Center district, Wetzel County, the Myers Gas Co. is bailing 6 bbls. a day from its test on the Joseph Allen heirs' farm. In Smithfield district, Roane County, the United Fuel Gas Co.'s test on the J. W. Epling farm is a 10-bbl. pumper in the Big Lime formation. The South Penn Oil Co. owns the oil right on this lease and the well has been turned over to that company.

Drilling and Starting Tests

The Columbia Gas & Electric Co. has started to drill a test on the John Walls farm in Union district, Lincoln County. In Grant district, Doddridge County, the Hope Natural Gas Co. started to drill on the Stephen Stuttler farm. In Center district, Wetzel County, the Carnegie Natural Gas Co. is fishing at its test on the A. G. Mace farm. In Liberty district, Marshall County, the Manufacturers' Light & Heat Co. is due in the Gordon sand on the J. R. Reid farm, in Washington district, the Myers Gas Co. is due in the same formation at a test on the C. N. Ramsey farm. In Church district, Wetzel County, W. Null & Co. have rig material at a location on the Thomas Phillips farm. In the same district, J. B. Orndoff is due in the Gordon sand on the Emma Kirkhart farm. In Washington district, Calhoun County, the Hope Natural Gas Co. is rigging up on the Farrar-Knotts farm.

Ritchie County

After drilling through the Big Injun sand at a test on the G. C. Frederick farm in Murphy district, Ritchie County, Beckerstaff & Co. have abandoned their test. The Spruce Oil & Gas Co. has a gasser in the Big Injun sand at a test on the Summers farm. In Murphy district, the Southern Oil Co.'s test on the Lemon heirs' tract, dry in the Big Injun sand, is a very light pumper in the salt sand. In Grant district, Edgar Lynch is drilling a test on the O. B. Phillips farm. W. A. Clark & Co. are due in the Big Injun sand at a test on the Dr. Bell farm. In Glenville district, Gilmer County, the Star Producing Co. has a rig up on the Charles L. Luzader farm. In Clay district, Monongalia County, the South Penn Oil Co. has started to drill from the Big Injun sand to the lower sands old No. 1 on the P. B. Tennant and McDermott-Tennant farms.

Fair Producer in Tyler County

On Geroge Run, McElroy district, Tyler County, Andrew Carl and others have completed in the Maxon sand a test on the B. J. Ash farm, for 25 bbls. a day. In Centerville district, three-fourths of a mile south of the same company's production on the J. L. McCullough farm, the Carter Oil Co.'s No. 3 on the J. S. Hamilton farm is dry in the Big Injun sand. Between the mouths of Broad Run and McElroy Creek, the same company is drilling a test on the Thornton Weekley farm. In Center district, Wetzel County, on Carney Run, the Myers Gas Co.'s second test on the Allen heirs' farm is a small gas well in the Big Injun sand. In Clay district, Magnolia County, the Carnegie Natural Gas Co. has drilled its test on the Rebecca Cowell farm through the Bayard sand to a depth of 3,407 feet and dry. It has been abandoned. In the same district, the Marshall Oil & Gas Co.'s test on the Minor Tennant farm is a light gasser in the same formation. In Paw-Paw district, Marion County, the Hope Natural Gas Co.'s test on the Conaway farm is a gasser in the fifth sand. In McClelland district, Doddridge County, the same company has a gasser in the Big Injun sand at a test on the R. Robinson farm. In Union district, Tyler County, Albert Wisely is drilling from the Maxon to the Big Injun sand on the J. B. Stewart farm.

In Murphy district, Ritchie County, the Beren Oil Co. has drilled to the lower sands an old well on the Lawson Brothers' farm. It is dry. The Hope Natural Gas Co.'s test on the Andrew Jordon farm, in Grant district, is a gasser in the salt sand. In DeKalb district, Gilmer County, the McCall Oil & Gas Co.'s No. 3 on the D. M. Miller farm is a gasser in the Big Injun sand. In Center district, Britton Brothers have a gasser in the Maxon sand on the Baptist Church lot. The Camden Gas Co. completed a gasser in the Maxon sand at a second test on the Charles Heeter farm. In Mannington district, Marion County, R. F. Monroe has a Gordon sand gasser on the A. M. Rowand farm. In Sheridan district, Calhoun County, the Richter Oil Co. has a light pumper in the salt sand on the J. L. Elliott farm. In Union district, Wood County, Dollman & Kingsbury have a 4-bbl. pumper in the Cow Run sand at No. 4 on their own farm.

In Grant district, Wetzel County, the Hope Natural Gas Co. has drilled a test on the John Ingram farm through the Gordon sand. It is a gasser in this formation. In the same district, the same company is due in the Big Injun sand at a test on the Rachel L. Lowe farm, and building a rig on the Mary J. Robins farm. In Proctor district, the Hope Natural Gas Co. is fishing for a bit on the Lemuel Goddard farm. In Greene district, Rawe Brothers have part of the rig material at a location on the L. W. Morgan farm.

Gas Companies Active in Calhoun

The gas companies are increasing development work in Calhoun County. In Sherman district, the Hope Natural Gas Co. has rigs up on the S. W. Gainer and L. P. Collins farms. The same company is rigging up on the J. C. Smith farm. In Lee district, the Hope Construction & Refining Co. has the road completed to a location on the W. S. Schoolcraft farm. In Sherman district, Clem Morris and others have part of the rig material at a location on the Maggie Barker farm.

In Simpson district, Harrison County, the Four-Eight Oil & Gas Co. has started to drill on the John D. Warner farm. In the same district, the Aizpurin Gas Co. has started to drill on the Newton Richards farm. In Clay district, Wetzel County, the Manufacturers Light & Heat Co. is rigging up on the H. E. and A. E. Chaney farm. In Center district, the Hope Natural Gas Co. has started to drill on the F. D. Evans farm. In Liberty district, Marshall County, the Decem Development Co. has a rig up on the Robert M. Bonar farm. On Paw-Paw Creek, Paw-Paw district, Marion County, the West Penn Public Service Co. has started to drill on the L. M. Laugh farm. On Conrads Run, Reedy district, Wirt County, the Heck Oil Co. is drilling No. 3 on the S. D. Sheppard farm. On Lens Creek, Linden district, Kanawha County, the United Fuel Gas Co. has started to drill on the William A. Bradford farm. On Wichters Creek, Cabin Creek district, the same company has a rig completed and started to drill on the Ella B. Tompkins farm.

Test Wells Drilling and Starting

In Collins Settlement district, Lewis County, the West Fork Oil & Gas Co. is due in the Big Injun sand at a test on the E. R. Haymond farm. In Battelle district, Monongalia County, O. C. Bradley is fishing on the Wise-Tennant farm. The Hope Natural Gas Co. started to drill on the Eph McCoy farm in McClelland district, Doodridge County. In the same district, the Carter Oil Co. is building a rig on the I. E. Smith farm. In Smithfield district, Roane County, the United Fuel Gas Co. started to drill on the W. L. Hershberger farm. The same company has made a location on the A. M. D. Hershberger farm. The Hope Natural Gas Co. started to drill on the A. D. Adams farm, in Washington district, Calhoun County.

Lincoln County

In Union district, Lincoln County, the Columbia Gas & Electric Co. started to drill on the John Walls farm. In Duval district, the Grant Gas Co. is drilling on the Emma J. Stowers farm. Roy & McComas are drilling on the Walter Scraggs farm. The Cambridge Gas Co. is drilling on the Wiser Adkins farm. In Laurel Hill district, the Columbia Gas & Electric Co. is drilling at 4,300 feet at its deep test on the J. C. Cline farm. In McComas district, Cabell County, the Star Producing Co. is fishing for a string of tools on the Walter E. Swann farm.

Ritchie County Tests

In new work under way and starting, Ritchie Conty is still in the lead. On Hughes River, Murphy district, the Hope Natural Gas Co. has the rig completed for a test on the J. R. Westfall farm. In the same district, Deem & Co. have a rig completed on the R. A. Scott farm. In Union district, C. O. Prunty is due in the Big Injun sand on the Okey Nutter farm. In Center district, Gilmer County, the Carter Oil Co. is shut down for water on the G. D. Stump farm. In

(Continued on Page 68)

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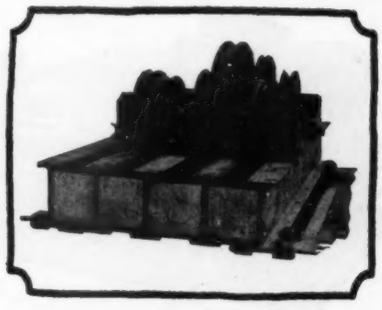

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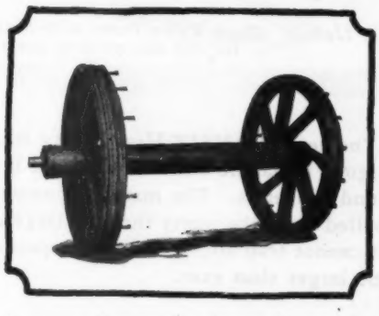

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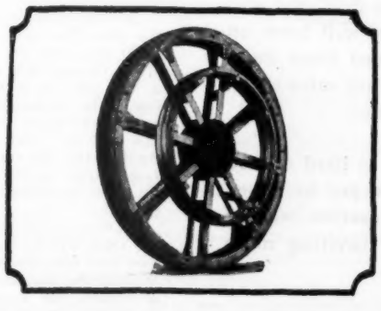
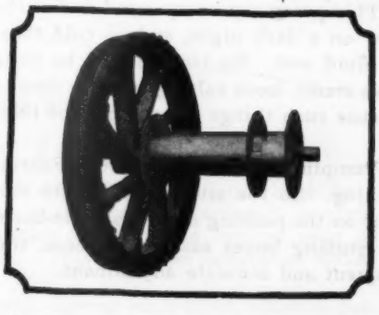




The International Derrick & Equipment Company
Columbus, Ohio
Los Angeles, Cal.

Tulsa Shreveport Houston Casper Bakersfield Taft Oil City Smackover El Dorado, Kansas
Export Representation, 2 Rector St., New York

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

ICE COLD— RED HOT

The temperature of the fluid pumped is immaterial.

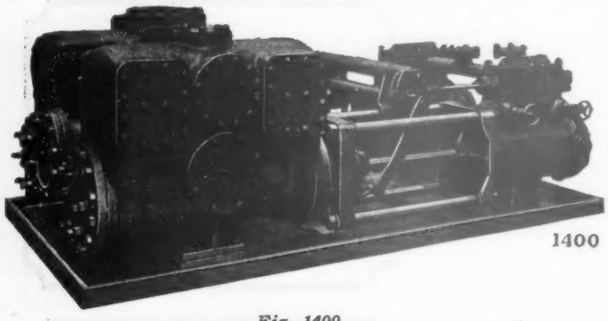


Fig. 1400
12x9x18" Block Valve Pump with base plate drip pan, for 300 lbs. working pressure.

The new TRANSIT Heavy Duty Block Valve Pump was designed to handle either hot or cold liquids or semi-liquids around refineries. The material pumped is introduced and expelled from the pump through large direct fluid passages that cannot trap air, and through special design valves now made larger than ever.

This pump can be operated so hot that the fluid end will glow on a dark night, and so cold that frost will form on the fluid end. No trouble will be experienced from loose valve stems, loose valve guards, or loose separate valve seats, because such things are not part of this pump.

Pumping hot tar around 700° Fahrenheit is hard on rod packing. So the stuffing boxes are made deeper to lessen wear on the packing and rods. Tie-bar construction renders the stuffing boxes easier of access, thereby inviting more frequent and accurate adjustment.

(Complete information gladly furnished)

NATIONAL TRANSIT PUMP & MACHINE CO.
OIL CITY, PA.
District Offices:
NEW YORK PHILADELPHIA PITTSBURGH CLEVELAND TULSA HOUSTON DENVER

CENTRAL WEST

(Continued from Page 50)

showed the oil was drilled on the Snuffin land at Brewersville.

Illinois Field

While there are approximately 20 strings of tools working in various sections of Illinois, only one completion was reported for the week, which was the Gillette Oil Corp.'s No. 3 on the southwest corner of the William Reisinger, Section 25, Casey Township, Clark County, with a production of 25 bbls. from the stray sand at a depth of 1,434 feet. No. 4 will be started at once, as this lease has proven better than average wells, and is in the new sand encountered some time ago in the Martinsville Township area of the same county, being midway between the shallow pay sands and the Trenton Rock formation, which is also producing oil in that part of the county.

A. B. Bement has started a test well on the William Tilbert farm, in Section 5, Lawrence Township, Lawrence County. In Wabash Township, Wabash County, the Max Oil Co., has started the drill at a second test on the Holson-Dorney farm, Section 18.

In Irvington Township, Washington, in the Centralia area, the Schunk Petroleum Corp. has abandoned Nos. 2 and 3 on the William Brewer farm, Section 25.

Central Ohio

A fairly good week prevailed in the Central Ohio Field, there being a total of 24 completions reported, one of which was oil, with 5 bbls. 6 dry holes and 17 gas wells. There are 5 new rigs being constructed and 6 new wells started drilling. The recent advances in the price of crude in this field will bring about the drillinig of many wells during the early spring and summer season. In certain parts of the field, especially in the western section, oil is found in the shallow Berea sand and also in a stray sand and the deep Clinton and in the southern part of the Maxon, Big Injun, Cow Run and other shallow sands, so there are still many spots that have been overlooked that will come into play this season.

In Orange Township, Ashland County, the Logan Gas Co. drilled a light gas well in No. 1 on the J. J. Brown farm, Section 7, while No. 2 proved a dry hole. In Green Township, same county, the same company drilled in a good gas well at No. 1 on the P. C. Cowan farm, Section 21.

In Harrisville Township, Medina County, the East Ohio Gas Co., brought in a duster in No. 1 on the Melissa Steele farm, Lot 90.

In Grafton Township, Lorain County, the Ohio Fuel Gas Co. drilled in a test 1,320 feet from the north and west lines of the George Hole farm, Lot 13 and got a dry hole at a total depth of 2,975 feet. In Columbia Township, same county, the same company drilled a light gas well at a test on the C. F. Ruder, Section 13. In the same township, the Logan Gas Co. hit a nice gas well at No. 1 on the Jeremiah Martin farm, Section 31.

In Wooster Township, Wayne County, the Ohio Oil Co. brought in a 500,000-foot gas well in a second test on the William N. Orr, Section 21. In Milton Township, the Logan Gas Co.'s No. 1 on the E. Steiner, Section 21, is reported at 5 bbls. In Congress Township, Harmon and others' No. 1 on the J. W. Sheppard, Section 29, was a duster, and Hulse & Kundtz's No. 2 on the Mary M. Shilling, Section 8, is a light gas well. In Cannan Township, Daugherty Brothers' No. 3 on the J. Slemons 163-acres, Section 29, is above the average gas well.

In Monroe Township, Holme County, the Ohio Fuel Gas Co. has a very light gas well at No. 1 Alma Martin farm, Section 7, while the East Ohio Gas Co. has a duster at No. 2 on the M. G. Bird farm, Section 8. In Hardy Township, same county, the East Ohio Gas Co. struck a nice gas well at its No. 1 on the S. S. Troyer 100 acres, Section 33. In Washington Township, same county, the Logan Gas Co. drilled in an excellent gas well at a test on the W. R. Fulmer farm, Section 29. In Kilbuck Township, the Carter Oil Co. drilled in a light gas well in No. 1 J. S. Jackson farm, Section 2.

In Carthage Township, Athens County, the Ohio Fuel Supply Co.'s No. 3 on the Thomas Bond farm, Section 5, is a good gas well in the Keener sand at 1,350 feet. McBride and others' No. 1 on the Watkins farm, Section 2, had all the earmarks of a big gas well, but broke in and if it can be exhausted will make a good well in the Keener sand at 1,228 feet. Sweeney and Snodgrass drilled in a light gas well in their No. 2 on the H. E. Allen 202 acres, Section 30, the gas being found in the Maxon sand at 966 feet.

In Troy Township, Athens County, McBride and others have a showing for 1,000,000 feet from the Keener sand at 1,302 feet in No. 3 on the Fritz Ahrendt farm, Section 36. In Rome Township, same county, Harry W. Leeper and others' No. 1 on the Davis heirs 20 acres, Section 23, shows for close to 500,000 feet from the Maxon sand at 1,074 feet. In the same area, the Rice Oil & Gas Co.'s No. 7 on the W. C. Rice farm, Section 28, is a good gas well from the Maxon sand at 952 feet.

In Dover Township, Cuyahoga County, Hulse & Knudtz's second well on the M. Griffin Lot 27 is reported a dry hole.

New Work Under Way

The Empire Gas & Fuel Co. made a location for a test on the southeast quarter of the Thomas Armitage 12 acres, Section 31, Columbia Township, Lorain County.

In Cannan Township, Wayne County, the Smpire Gas & Fuel Co. has started the drill at its second test on the J. Lemon 143 acres, Section 24. The East Ohio Gas Co. is drilling No. 2 on the C. and E. Sells' farm, same section, and William Denney and others are drilling a test on the H. Rock 28 acres, same section in the northeast corner of the farm.

In Monroe Township, Holmes County, the Norwood Oil Co. has started the drill at No. 2 on the W. R. Parson 00 acres, Lot 5 and No. 1 on the David Pyers 89 acres, same lot. The Empire Gas & Fuel Co. is drilling No. 3 on the U. S. Davenport 150 acres, Lot 5, and made a location for a test on the northwest corner of the Elmer E. Connor 100 acres, Lot 14.

In Prairie Township, Holmes County, the East Ohio Gas Co. made a location for No. 2 in the northeast corner of the L. A. Sowash 56 acres, Lot 17 and for No. 1 on the northwest corner of the David Anderson 37 acres, same section or lot. In Hardy Township, the same company made a location for No. 2 on the southeast corner of the S. S. Troyer 100 acres, Lot 33.

Offside Development.

The Pure Oil Co. drilled a light gas well in No. 1 on the M. C. Julian farm, in Barlow Township, Washington County, getting the gas in the Maxon sand at 1,314 feet. William Barrett and others' No. 1 on the A. Harvey, same township, is reported at around 3,000,000 feet from the Big Injun sand at 1,415.

McTaggert and others drilled a dry hole on the Clara Tullius, in Barlow Township, Washington County, the Keener sand being dry at a depth of 1,250 feet. In Dunham Township, same county, Schultz, Pollard and others are credited with a 4,000,000-foot gas well on the Neal Shaw, from the Maxon sand at 1,195 feet.

In Barlow Township, Washington County, the J. C. Dinsmore estate's No. 1 on the W. H. Bell 57 acres in fractional Lot 768, showed a very light gas well in the Maxburg sand at 947 feet, while No. 1 on the S. Horn 9 acres, same section, was dry in the Maxon at 1,205 feet.

OPENS BRANCH IN MEXICO

The Chicago Pneumatic Tool Co. has announced the opening of a branch office in Mexico at Apartado 695, San Juan de Letran, 15 Mexico City, D. F.

The Dawn of a New Era

Drilling Methods were Advanced with the Introduction of

Leidecker Spiral Drilling Tools

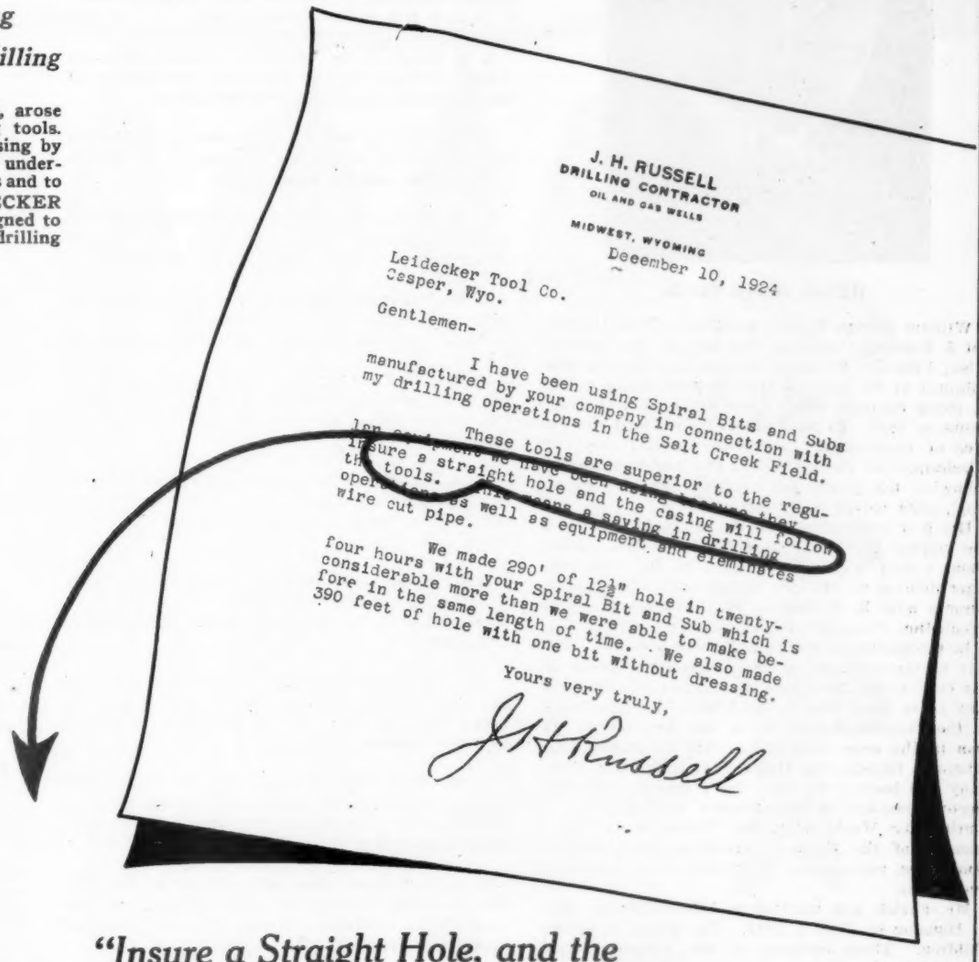
Deeper Wells—More Casing

Required better designed Drilling Tools

New conditions, in drilling operations, arose which required better designed drilling tools. To insure the safe "landing" of your casing by eliminating flat or crooked holes—to save underreaming, to drill better in cavey formations and to drill faster under any conditions, LEIDECKER SPIRAL DRILLING TOOLS were designed to meet these and many other existing drilling problems.

Spiral Drilling Bit Harrdison Type Patent Pending

Spiral Substitute Jacques Type Patent Pending



J. H. RUSSELL
DRILLING CONTRACTOR
OIL AND GAS WELLS
MIDWEST, WYOMING

December 10, 1924

Leidecker Tool Co.
Casper, Wyo.

Gentlemen-

I have been using Spiral Bits and Subs manufactured by your company in connection with my drilling operations in the Salt Creek Field. These tools are superior to the regu- tools. ... insure a straight hole and the casing will follow ... operations as well as equipment and eliminates wire cut pipe.

We made 290' of 12¼" hole in twenty-four hours with your Spiral Bit and Sub which is considerable more than we were able to make before in the same length of time. We also made 390 feet of hole with one bit without dressing.

Yours very truly,

J. H. Russell

"Insure a Straight Hole, and the Casing Will Follow the Tools"

LEIDECKER SPIRAL BITS AND SPIRAL SUBSTITUTES not only demonstrate their superiority by drilling faster and insuring absolutely straight hole in any formation—they also reduce fishing jobs due to broken pins or boxes, and save the jars considerable stress. This means an additional saving in time, material and labor.

Spiral Drilling Bits are scientifically designed—having more steel, which is better arranged. Two cutting edges instead of one and four cutting points instead of two. Write, wire or phone for further information on these advanced tools.

LEIDECKER TOOL COMPANY
Marietta, Ohio

Bartlesville, Okla. **Basin, Wyoming** **Casper, Wyoming**
TULSA, OKLA.
Phone 2-6210

LEIDECKER

MEN KNOWN IN OILDOM

William Stamps Farish

William Stamps Farish, president of the Humble Oil & Refining Company, was born at Mayersville, Miss., February 23, 1881. His early education was obtained at St. Thomas Hall, a preparatory school at Holly Springs, Miss., from which he was graduated in 1897. In June, 1901, he received the degree of Bachelor of Law from the University of Mississippi, at Oxford, Miss., and for two months following his graduation practiced law in Mississippi, then moved to Beaumont, Tex.

His first connection with the oil business was in the employ of the Texas Oilfield Limited. After about a year with that concern, he did some contract drilling on his own accord and later in partnership with R. L. Blaffer, E. F. Simms, the Gulf Production Company and The Texas Company.

In recognition of the place he had made for himself in the industry, he was elected president of the Gulf Coast Producers Association in 1915, and two years later was honored with the presidency of the Texas-Louisiana Oil & Gas Association. It was in the same year, 1917, that he joined with others in forming the Humble Oil & Refining Company and became its first vice president. He was elected president of the company in 1922.

During the World War, Mr. Parish served as a member of the National Petroleum War Service Committee, representing the producers of Louisiana and Texas.

Mr. Farish was married to Libbie Randon Rice at Houston on June 1, 1911. The couple have two children. Three brothers of Mr. Farish are all engaged in the oil business.

Golf and shooting are his favorite sports, but in spite of his fondness for these, he devotes a great deal of time to civic affairs in Houston, being a member of the Houston Club, and a director of the Houston Community Chest. He is also director of the Houston Land & Trust Company, the South Texas Cotton Oil Company, and the Cyrus W. Scott Manufacturing Company, and is a director of the American Petroleum Institute.

PERSONAL PARAGRAPHS

R. E. Bell, of the Denver office of the Continental Supply Company, was a recent visitor in Casper, Wyo.

* * *

W. O. McNeil and P. M. Hall of Los Angeles, Cal., were recent visitors in Taft, Cal., where they are interested in oil lands.

* * *

Capt in E. P. Campbell, oil and gas supervisor of the Bureau of Mines, returned recently to Denver after spending a week in Wyoming fields.

J. O. Ingram of the National Supply Company, of Casper, Wyo., returned recently from a trip to Fort Collins, Colo.

* * *

J. S. Blair, purchasing agent of the Prairie Oil & Gas Company, has returned to Cheyenne, Wyo., after a business trip to Casper.

* * *

R. C. Tarrant of Sheridan, Wyo., who has interests in Teapot Dome and Salt Creek fields, spent several days in Casper last week.

* * *

J. Holland of the Hendrie & Bolthoff Manufacturing Company, returned last week to Casper, Wyo., from a trip to Fort Collins, Colo.

* * *

J. W. Gillespie, credit manager of the National Supply Company, of Casper, Wyo., returned recently from a trip to the Pacific Coast.

* * *

R. L. Welch of the American Petroleum Institute was in Chicago recently to attend the meeting of the Institute's standardization committee.

* * *

Burr McWhirt, valuation engineer of the Roxana Petroleum Corporation, spent January in Wichita Falls, Texas, making a commercial appraisal.

* * *

F. H. Moore, president of the Independent Oil & Gas Company, is back at his home in Okmulgee, Okla., from a trip to California for his health.

* * *

A. M. McDermid, manager of the Rose Oil Company of Calgary, Mont., has been convalescent at his home, havinig an attack of stomach poisoning.

* * *

Russell C. Conkling has been transferred from the Tulsa office of the Roxana Petroleum Corporation to the Dallas office to do subsurface geologic work.

* * *

William Sester of Milwaukee was in Lyons, Kans., recently seeking a franchise to serve that city and surrounding towns with gas from the Blackwell fields.

* * *

M. T. Archer, chief engineer of the National Supply Company, returned to Toledo, Ohio, last week from a trip to the oil fields of the Rocky Mountain district.

* * *

C. J. Hares, chief geologist of the Ohio Oil Company, with headquarters in Denver, is making a trip which will take him through Wyoming, California and New Mexico.

* * *

C. W. Rice, sales manager for the Vickers Petroleum Company, is quarantined at his home in Wichita, Kans., because of the serious illness with diphtheria of Mrs. Rice.

* * *

E. L. Estabrook, petroleum engineer of the Midwest Refining Company at Casper, Wyo., left last week for an extended trip over the new fields and prospective areas of New Mexico.

* * *

H. A. Jones, who has been associated with the Johnson Oil & Refining Company, has started in the jobbing business at Scottsburg, Ind., under the name of the Jones Brothers' Oil Company.

* * *

W. T. Funk of the Standard Oil Company of New Jersey, with headquarters in Denver, was a business visitor at Casper, Wyo., looking over the Carter Oil Company's office here and at Salt Creek.

* * *

C. I. O'Neill, secretary of the Okmulgee Oil & Gas Association, was the principal speaker of the evening of an all-oil program broadcasted from the Bristow, Okla., radio station, February 2, 1925.

* * *

A. D. Aiken of the Midwest Oil Company and A. E. Johnson, of the Mountain & Gulf Oil Company, returned last week from a conference held with officials of the Midwest Refining Company at Casper, Wyo.

* * *

Ralph Dangerfield is now manager of the lubricating sales department of the Marland Refining Company, at Ponca City. Mr. Dangerfield was formerly with the Alton Mercantile Company of Enid, Okla.

E. R. Floyd of Denver has been retained as chief consulting geologist of the New York Oil Company. Mr. Lloyd will not devote all of his time to the eastern company, and will carry on his former business as usual.

* * *

F. G. Shreves and Carl Modesitt of Denver; A. L. Schellhammer, W. R. Shellhammer and Herbert Eaton, of Warren, Pa., have been at Okmulgee, attending a directors' meeting of the Denver Producing & Refining Company.

* * *

H. H. Brooks of the Denver office of the Midwest Refining Company, and W. O. Merryweather, of Marine Oil Company, also of Denver, attended the meeting of the Rocky Mountain Oil & Gas Association, held in Casper recently.

* * *

L. C. Stevenson, well known oil operator of Montana, passed through Casper, Wyo., on his way to Denver, last week. Mr. Stevenson is president of the Sunburst Oil & Gas Company and the Sunburst Oil & Refining Company at Great Falls, Mont.

* * *

C. Fred Tillotson, formerly with the Roxana Petroleum Corporation, has engaged in the marketing business in Chicago. He is located at the corner of South State and 55th Streets. His company is known as the Premier Refining Company.

* * *

Frederick G. Clapp announces that the investigations he has been conducting in Western Australia, have been completed and he has been obliged to report unfavorably on oil possibilities there. The fundamental conditions of oil occurrence were not found to be satisfactory. He has returned to New Zealand.

* * *

Fred E. Hosmer has been transferred from the Shreveport, La., office of the Gulf Refining Company to the Fort Worth office. He has been put in charge of all the Gulf's gasoline plants in the States of Louisiana, Oklahoma and Texas, with headquarters at Fort Worth. Mr. Hosmer is well known to North Texas oil men, having been located in Fort Worth several years before going to Shreveport.

* * *

William C. McDuffie, operating vice president of the Shell Company of California, has sailed from New York for London. He expects to be in England and on the continent for several months. During Mr. McDuffie's absence, William Reinhardt, general field superintendent of the Shell Company will be in charge of Shell operations in California.

* * *

Ferris Hamilton, Rocky Mountain representative for the Turnbuckle Steel Derrick Company has returned to Casper, Wyo., with his bride, who was Miss Jean Crawford, daughter of a prominent oil man of Columbus, Ohio. The Hamiltons have leased a handsome home on South Durbin Street, where they are at home to the many friends Mr. Hamilton has made during his sojourn in Casper.

* * *

C. L. Reeder, manager of the oil equipment department of the A. Y. McDonald Manufacturing Company, will spend the month of February at Los Angeles and other Pacific Coast points in the interest of his company. He is accompanied on the trip by Mrs. Reeder. The A. Y. McDonald Manufacturing Company is represented on the Pacific Coast by the U. S. Flexible Metallic Tubing Company, with offices at Los Angeles, San Francisco and Seattle.

* * *

F. R. Sheller, who has been with the Paragon Refining Company as superintendent of pipe line construction nearly four years at Bowling Green, Ky., has resigned his position and will take a trip through the Mid-Continent, Colorado, New Mexico and other fields. Mr. Sheller is well known in the industry and was instrumental in the Paragon entering the Kentucky Field, where it has extensive interests in the western division. This company outside of its gathering lines in the Bowling Green Field of Warren County, constructed a line from Glasgow to the Monroe and Cumberland County fields, and an extension to the Moore and other pools in the Glasgow district. These constructions were under the supervision of Mr. Sheller. Before going with the Paragon, he spent 12 years with the Ohio Oil Company.

"OILWELL"
FISHING TOOLS THAT FETCH THE FISH

"A STRING THAT SPEARS FOR ITSELF"

OIL WELL SUPPLY CO.

NEW YORK PITTSBURGH, U.S.A. LOS ANGELES

SAN FRANCISCO TAMPICO LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

EQUIPMENT AND SUPPLIES

NEW DISTRICT OFFICES FOR FOAMITE-CHILDS

The Foamite-Childs Corp., fire protection engineers and manufacturers, whose factory and general offices are at Utica, N. Y., announce the recent opening of several new district offices.

An office in Jacksonville, Fla., will serve most of the State of Florida and the southern part of Georgia. District Manager Herbert G. Norton, who will also warehouse a complete stock of Foamite-Childs products in Jacksonville, has charge.

Another Foamite-Childs office has been opened at 1032 Munsey Building, Washington, D. C. James M. Castle, Inc., Foamite-Childs representative at Philadelphia, Pa., have moved into more commodious and convenient ground floor quarters at 1718 Vine Street. The New York City district office has been moved uptown to 128-136 West 31st Street, in the Greeley Arcade Building.

Foamite-Childs interests in Ohio and Kentucky, formerly handled by the Scallan Supply Co., are now being directed by the Fire Equipment Corp., with offices at 19 East Central Parkway, Cincinnati, Ohio. Fire Equipment Corp. also maintains Foamite-Childs branches at Cleveland, Toledo and Columbus, Ohio. The personnel of the new Cincinnati office includes D. H. Reedy and C. E. Schultz, who are well known as fire protection specialists in this territory.

BALL-BEARING CHAIN BLOCK NOW ON MARKET

The Yale & Towne Manufacturing Co. of Stamford, Conn., has recently designed and placed on the market a new ball bearing chain block. The introduction of large capacity ball bearings which support the load sheave, is the latest important step in a long series of improvements in this block.

By introducing special steel bearings to support the load sheave, the entire weight of the load and all surges and stresses are taken on the ball bearings. It is claimed that the number of pounds of hand chain pull required to lift any given load has been much reduced, due to a lessening in friction at the bearing points of the load sheave shaft. The design and arrangement of these bearings provides for their being retained by steel and felt dust-proof washers, and for continuous lubrication of the bearings, driving pinion, shaft and planetary transmission.

The blocks are being built in a number of sizes, ranging from ¼ to 20 tons capacity.

WRENCH FIRM REORGANIZED

In a reorganization of the Cantilever Wrench Co., Inc., the entire assets and liabilitieis of the firm have been taken over by the Cantilever Wrench Corp., with offices and factory at 354 Mulberry Street, Newark, N. J. Officers of the new company are W. E. Cooke, president and treasurer; A. B. Cozzens, vice president and general manager, and F. J. Carnelli, secretary. The new concern will continue to manufacture the Cantilever reversible and ratchet chain pipe wrenches, and is perfecting a national sales organization to market its product.

SOOT BLOWER CATALOG

A soot blower catalog has just been published by the Marion Machine, Foundry & Supply Co. of Marion, Ind. It describes the complete line of soot blowers manufactured by the company, including the new types "AB" and "C." The catalog contains valuable engineering information not only for the practical engineer but for the consulting engineer also. Copies will be sent to anyone interested upon request.

PRICE ADVANCES STEEL FEATURE; MILLS OPERATING NEAR 90 PER CENT

By B. E. V. Luty

PITTSBURGH, Pa., Feb. 9.—The most conspicuous items of news in the steel trade in the past week or 10 days have been price advances covering nearly all the important finished products which were in line for advances through having had declines last year from the 1923 level.

It is by no means clear, however, that these advances signify what price advances in a commodity market usually do signify, that there is a strong and active market. There is no plain and convincing evidence there has been such buying pressure in these steel lines as would naturally force up prices. The market had, in fact, been reported as having turned relatively quiet in January after the very heavy buying of November and December. It was even said specifications were not coming in very freely on first quarter contracts, made at prices below those ruling on January 1.

To Stimulate Specifications

In some quarters, therefore, the opinion is held rather strongly that one purpose of steel mills in advancing prices at this time is to stimulate specifications on old contracts, also to encourage purchases at existing prices, as salesmen always notify customers when there is going to be an advance. From another angle, it is pointed out that right along mills have claimed they need higher prices ,and expected to make further advances eventually, but wished to proceed conservatively, hence the tendency to advance prices now may represent a disposition to take time by the forelock, for mills are now so well filled with business they can easily advance prices, while later on they may not be so well filled.

The foregoing applies to bars, shapes, plates, sheets and wire products. Since pipe, tin plate and rails held their prices of April, 1923, not having declines last year, the matter of advancing prices does not come up in the case of those commodities.

Since last report bars, shapes and plates have advanced to a single price of 2.20c f.o.b. mill, Pittsburgh district. Last week's report noted that one mill had made this advance, and now all the others have done likewise. This makes $2 a ton advance in bars and shapes and $4 a ton in plate, over prices at the beginning of the year.

About half the independent sheet mills have advanced prices $2 a ton on blue annealed ,black and galvanized sheets, and the American Sheet & Tin Plate Co. (Steel Corporation) has also made the advance. The higher prices are for second quarter, and the advance has given considerable stimulus to the placing of orders and contracts for the remainder of the present quarter. In the case of black sheets there has been shading by about half a dozen mills of the old price, so in that line there is quite a range in quotable prices. Also there has been some shading of the automobile sheet price as advanced in December. The market is thus quotable as follows: Blue annealed, 2.70c to 2.80c; black, 3,50c to 3,70c; galvanized, 4.75c to 4.85c; automobile, 4.60c to 4.75c.

Wire mills have been advancing wire products $2 a ton, thus raising nails from $3.85 to $2.95, f.o.b. mill, Pittsburgh or Cleveland. The usual 60-day contracts were first made at the old prices. Previous contracts, on a $2.75 basis, expired in January and were well specified, but buyers are not specifying so freely on the $2.85 contracts.

Pipe mills continue to have good sales of merchant pipe. Demand for oil country goods shows a little increase from week to week but is still rather light, it being the off season, while buyers show little disposition to anticipate requirements.

Steel mills as a whole are now operating at close to 90 per cent of capacity, or at well above the average rate in either of the past two years. While steel consuming prospects for 1925 were and still are very good, it looks as if too heavy a pace has been set for maintenance clear through the year, and a slight tapering off may begin soon, with chances of an increase again later on.

TO PRBVENT WASTE OF OIL

The Sour Lake Machine & Supply Co. of Sour Lake, Tex., has designed a device to present the waste of oil, common to the operation of pulling tubing. It will, it is said, permit oil standing in the tubing to drain back into the well bore, leaving the tubing emply as each point is raised above the derrick floor. To permit the fluid to drain into the hole, the device is so arranged that the ball of the standing valve can be picked up and held off its seat, during the pullinig of the tubing. Part of the device sets over the ball of the standing valve, 3 prongs being ready to take hold of the ball.

NEW DISTRICT SALES MANAGER

W. H. Wiewel, formerly assistant general sales manager, United Alloy Steel Corp., Canton, Ohio, has succeeded B. F. Bart as New York district sales manager of the Standard Seamless Tube Co., of Pittsburgh. Mr. Bart resigned his position, effective February 1.

LARGER CLEARANCES IN PIPE LINE WORK

Ample clearances for riding over a 12-inch pipe line while digginig is provided in the Barber-Greene Ditcher, Pipe Line Special, as described in a booklet recently published by the Barbar-Greene Co., of Aurora, Ill. The title of the booklet is "Cutting Mains and Services with a Barber-Greene Trencher." Besides increased clearances for pipe line work, this machine has crawler treads of 14 inches. The clearance is 17½ inches.

According to the booklet, a Pipe Line Special dug more than 11 miles of trench near Joilet, Ill., in a little more than a month, practicailly all of the digging being done astradle of a 6-inch pipe.

SALES MANAGERS MEET

A meeting of sales managers of the Marion Machine, Foundry & Supply Co. of Marion, Ind., was held recently at Dallas, Tex., with C. D. Erlewine, district manager for the Southwest, presiding. Plans for the new year were discussed.

The method of management of the branch stores of the company, instituted a year ago, was declared a complete success. Under this system, a certain amount of working capital is allotted each district manager to carry on business during the year, and each manager has to rely upon his own initiative to make as successful a turnover of his allotted investment as possible.

PULLING CAPACITY 25,000 LBS.

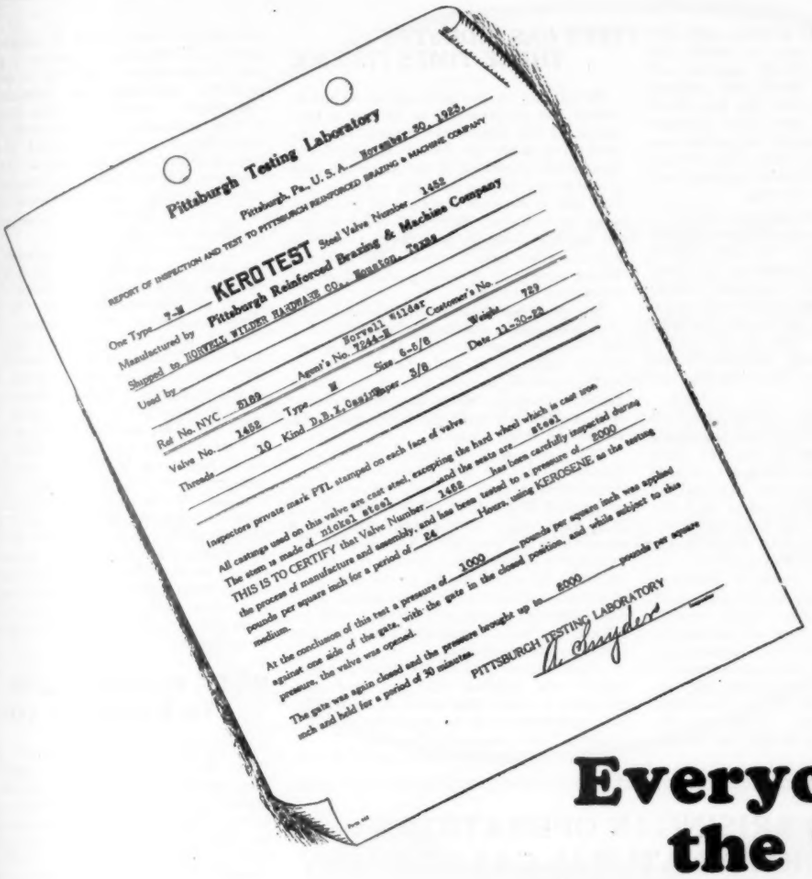
The Foggan safety sucker rods elevators, manufactured by George N. Foggan of Pleasantville, Pa., are made throughout of best drop forged steel, weighing about 26 pounds to the set of two elevators, according to a folder distributed by the maker, and have a pulling capacity of 25,000 pounds. They are made to fit ¾-inch, ⅞-inch and 1-inch rod squares. By picking up the elevator, which is a part of the latch that slides on the elevator stem, the elevator will then automatically right itself for taking in the rod and after the latch is back in its former position, it is impossible for the rod to get out, the folder says.

RESEARCH GROUP NEWS

"Research Group News" for January, the publication issued by the Electric Steel Founders' Research Group, contains several interesting articles concerning electric steel castings. One article entitled "Keeping Shrinkage Cavities out of Castings," explains the need of care in shaping the head or riser on castings. "Improvement in the Uniformity of Composition of Electric Steel" and "Heat Treatment of Steel Castings" are two other articles of value in the publication.

SALESMEN AND MANAGERS, BESSEMER GAS ENGINE CO.

The convention of managers and salesmen of the Bessemer Gas Engine Co., held recently at Grove City, Pa., was voted a big success.


Pittsburgh Testing Laboratory

Pittsburgh, Pa., U. S. A. November 20, 1923.

REPORT OF INSPECTION AND TEST TO PITTSBURGH REINFORCED BRAZING & MACHINE COMPANY

One Type 7-W KEROTEST Steel Valve Number 1452

Manufactured by Pittsburgh Reinforced Brazing & Machine Company

Shipped to NORVELL WILDER HARDWARE CO. Houston Texas

Used by Norvell Wilder Customer's No.

Ref. No. NYC 5189 Agent's No. 7244-W Weight 729

Valve No. 1452 Type W Size 6-6/8 Date 11-20-23

Threads 10 Kind D.S.K. Cast Upper 5/8

Inspectors private mark PTL stamped on each face of valve

All castings used on this valve are cast steel, excepting the hand wheel which is cast iron

The stem is made of 21.60.91 steel and the seats are 51.61 steel

THIS IS TO CERTIFY that Valve Number 1452 has been carefully inspected during the process of manufacture and assembly, and has been tested to a pressure of 6000 pounds per square inch for a period of 24 Hours, using KEROSENE as the testing medium.

At the conclusion of this test a pressure of 1000 pounds per square inch was applied against one side of the gate, with the gate in the closed position, and while subject to this pressure, the valve was opened.

The gate was again closed and the pressure brought up to 6000 pounds per square inch and held for a period of 30 minutes.

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Tested for 24 Hours with Kerosene

Everyone Knows of the "Soaking" Qualities of Kerosene

Because it penetrates so much better than water, it is used under high pressure to test every KEROTEST Valve before shipment.

Any flaw, therefore, that is likely to remain until the valve is completely constructed will be found during this rigid kerosene test.

This feature, combined with the Electric Ilmenite Steel Body construction; massive strength and perfect balance; the wider margin of safety assured under sudden and otherwise destructive gas pressures have built up an enviable reputation for KEROTEST in every field.

The KEROTEST catalog gives complete information on this superior line of cast-steel valves and fittings.

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Pittsburgh Reinforced Brazing and Machine Co.

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NATURAL GAS DEVELOPMENTS

Drilling and Casing Must Get Attention To Prolong Gas Well

By S. W. Meals

*President Carnegie Natural Gas Co.**

In order to prolong the life of gas wells more attention must be given to proper drilling and casing of wells, to prevent mud and water (the enemies of natural gas) from coming in contact with the gas-producing sands. When we lay a pipe line we test for leaks—even though it be a screwed line and with a test of from 100 lbs. to 200 lbs. we usually find a number of leaks in every mile of pipe laid, which we close with collar leak clamps. However, when a well is to be drilled—in some of which almost a mile of pipe is used—it is usually left up to the drillers or contractor to run the pipe depending only on a 24-hour test after the casing is run to find if the casing is tight and in many cases only a small flow of water is encountered and the water may not fill up and find its level for a week or so after the well is cased. There was a time when the rock pressure helped to keep the water out, but with reduced rock pressure and an increased water pressure it requires more precaution than ever to keep our wells dry.

The losses of gas through the infiltration and encroachment of wate in gas sands have been enormous. Water from above the producing measure is one of the most damaging troubles in our gas fields. It may gain access to a well by casing set too high or too low, through leaks around the bottom, through the couplings, collapsed or split casing or line worn and corroded casing. A mud fluid filled between the casing and the wall of the hole seems to be the surest way to protect wells and keep them free from water. Water found between two productive sands has taken its toll of gas and ruined many fields. Much damage has been done by abandoned wells not having been properly plugged and water is permitted to enter producing sands. I would recommend systematic casing by all the companies, as it would be a great help to the life of our gas fields. One operator may protect certain gas-bearing formations and another nearby may ignore them entirely, offsetting the good work of the first operator by failing to protect them. Migration of water through the sands also takes its toll of gas. Well records should note the location of water and the level to which it stands and this information be available to all. Cooperation and systematic drilling by all the operators will yield large returns.

A competent employe should be at the well when the casing is run and see that each thread is doped with a proper thread paint and each joint is set tight. I would recommend that a ring and slips be used rather than an elevator so that the shop end of each joint can be tightened if need be, and if a packer is not used on the bottom of the casing—then a thin mixture of clay should be placed in the bottom of the hole and the casing lowered through this to the cap rock where the casing is to be set.

I would suggest that the inner string of casing be well painted with a proper rust-proof paint before inserting in the well. In many of our gas fields the outside strings of casing should be left in, not only as a protection to the well, but also to the gas-bearing sands. In many cases it is false economy to remove the outer strings of pipe.

Where gas is found in sands that produce more or less water or old wells which have not been properly cased or packed and water percolates through—if the water will not carry out with the gas, a pocket should be drilled a sufficient depth below the gas pay to permit the water to drain out of the sand at all times and the well tubed and pumped often enough to keep the pay free from water. Many wells have been plugged and abandoned that might be making gas in paying quantities today had proper measures been taken in time to have kept them free from water or mud.

In 1910 27,305 wells produced 509,000,000,000 feet or an average of about 50,000 feet per well per day. In 1911 28,978 wells averaged about 48,000 feet per well. In 1916, 37,989 wells averaged 50,000 feet per well. In 1917, 39,300 wells averaged 54,000 feet per well, and in 1918 or the year of our largest production 40,369 wells produced 795,110,376,000 feet, or an average of about 54,000 feet per well.

I'll venture that the average per well per day of all Pennsylvania gas companies is not much above 30,000 feet per well. No doubt we have wells which are capable of producing more than the average per well if small compressing units were installed to pump the gas into the lines. About three years ago our company installed, at a cost of $1,000, a direct connected compressor (capable of handling 100,000 feet per 24 hours) at two small oil wells—which wells, when tested, showed about 80,000 feet of casinghead gas per day. A meter was installed to measure the gas and with no expense or attention other than the regular oiling by the pumper of the oil wells, this outfit has run every day since it was set, delivering from 70,000 to 80,000 feet of gas per day in the line.

*Before Pennsylvania Gas Association.

SEES GAS INDUSTRY THREE TIMES ITS SIZE

Revolution in the methods of manufacturing gas in America is almost a certainty of the immediate future, was the prediction made by Harry C. Abell, of New York, president of the American Gas Association, in his opening remarks before the midwinter meeting of gas company executives. This will come about, the speaker declared, because the industry will be called upon to replace the nation's failing supply of oil with gaseous fuel for industrial heating.

Mr. Abell bases his prediction on President Coolidge's creation of the Federal Oil Conservation Board. He interprets this to mean rapid, and probably drastic, curtailment of the use of oil in industrial heating processes where it now furnishes perhaps 90 per cent of the fuel supply where gas could be used.

"The estimated available and usable supply of oil in the United States is 9,000,000,000 bbls. and the present rate of annual production 750,000,000 bbls.," Mr. Abell said. "It is apparent, therefore, that the supply will last only 12 years. A strict conservation program, national in scope, seems to be the only solution, and such a program means that the industrial plants of the nation will be obliged to turn to manufactured gas for their fuel requirements.

"This means that in 10 years the gas output will increase 100 per cent and probably a great deal more, and 20,000,000 customers will be connected to the mains of gas companies."

Mr. Abell warned his hearers of the tremendous task ahead in preparing to satisfy this demand, to provide new methods of generation and even to build the requisite additional gas manufacturing equipment. Another problem that must be met and solved, he said, was such adjustment of rates to the public that each customer shall pay the costs he causes the company and not force the industrial user to pay not only his own share but also the losses incurred from those who pay less than their share.

"Progress in the gas business during the last two decades has been a record of peak after peak, with three times as much gas consumed during the last 10 years as during the preceding 10," the speaker declared. A striking fact is that while the household use of gas increased 100 per cent in the last 10 years, the use of gas in industry jumped 1000 per cent.

"We have got to make plans for an industry three times its present size. If gas service does not replace industrial use of oil this year, the change will be made next year or the year after. It is inevitable. To be able to take on this business we must obtain hundreds of millions of dollars of new capital; we must make gas quicker, and make it in larger quantities; we must have the full co-operation of the regulatory bodies, and we must adjust rates so that the cost of service will be equitably proportioned among al classes of customers."

PROBLEMS ARISING IN OPERATIONS OF OKLAHOMA NATURAL GAS COMPANY

By Robert W. Hendee

Natural gas is a mechanical mixture of several combutibile and diluent gases thoroughly diffused through each other. From an average of 63 analyses made on gas samples taken from the various fields in which the Oklahoma Natural Gas Co. has lines we obtain a gas as follows:

Methane	CH_4	89.62%
Ethane	C_2H_6	6.12
Carbon dioxide	CO_2	0.26
	O_2	0.46
	N_2	3.54
		100.00%

This composite gas has a calculated heating value of 1068 B.t.u.'s per cubic foot and a calculated gravity of .602.

From the above typical analyses we see the importance of the paraffin series, of which methane, CH_4, or marsh gas, predominates. The heating value of methane is 1065 B.t.u. per cubic foot and the specific gravity 0.5529. The second member of the series ethane, C_2H_6, is second in importance in our gas and as the heating value of ethane is 1861 B.t.u., this may account for the fact that most of our gas delivered is over the 1000 B.t.u. mark.

We do not try to trace any of the higher members of the series such as propane (C_4H_{10}) nor do we look for ethylene (C_2H_4) in the olefine series. Carbon monoxide and hydrogen in the free state are not reported, nor do we test for any hydrogen sulphide.

Methane and Ethane

These gases are all that contribute to the heating value of the gas and of these, only two, methane and ethane, are important. Besides these there are the inerts such as nitrogen, carbon dioxide and free oxygen, which, altogether, never go over 10 per cent. Our chemist tests for carbon dioxide and oxygen, and, I believe, calls the residue all nitrogen. None of these gases have a heating value and act as a diluent of the natural gas, reducing the effective heating value.

It might be stated here that gas companies have forgotten the old "rule of the thumb" methods and are becoming as efficient in their operation as any other industry. For instance, before the connection order is signed to instruct a foreman to connect a certain well to the line, the open flow and rock pressure are taken, as well as finding out the sand from which the gas is coming. At the same time a sample of the gas is taken and forwarded to the chemist at Tulsa. Therefore, when the connection order awaits the necessary signature, the open flow, rock pressure, sand from which gas is produced and the analysis of the gas are at hand to guide the person signing.

Extent of Operations

At present our company is connected to about 350 wells located in approximately 30 fields scattered over the State. Some are wells of large volume and rock pressure while others are small. Nevertheless we try, in each field or district to give every producer the same kind of treatment. To do this, it is necessary, where the field is large enough to warrant the expense, to maintain a field chart man who received the meter charts daily and fizures them at once. At the first of the month this man receives the open flow of all the wells in this territory and immediately figures out the percentage which they hope to take from the field. This percentage, say 5 per cent of the open flow of each well, is applied alike to all the wells in that particular field. The chart man, therefore, has before him a volume, in thousands of cubic feet, to be taken from each well. Every day as he figures the volume taken from a well he applies this volume as a per cent against the total volume to be taken from

(Continued on Page 80)

WORK BEGUN ON LINE TO KANAWHA COUNTY

PITTSBURGH, Pa., Feb. 7. — The Hope Natural Gas Co. has part of the pipe strung for its 20-inch pipe line and started to erect its two compressor stations. The line will be connected with its present line near Cedarville, Gilmer County, W. Va., and extend to Kanawha County, 100 miles. Construction work is under way for the two big compressor stations. Both stations will be named in honor of two distinguished West Virginians. The one just east of Charleston on the C. & O. Railroad, Kanawha County, will be known as Stonewall Jackson station and the other, a short distance from Crendenin, Roane County, on the B. & O. Coal & Coke Railroad, near the point where Roane, Clay and Kanawha counties join, will be named "Cornwell," in honor of former governor, John J. Cornwell.

The Hope intends to push the work of completing the line as speedily as possible and have it in operation by late fall or early winter. Part of the country through which the line will pass is rugged and it will pass over or under many streams.

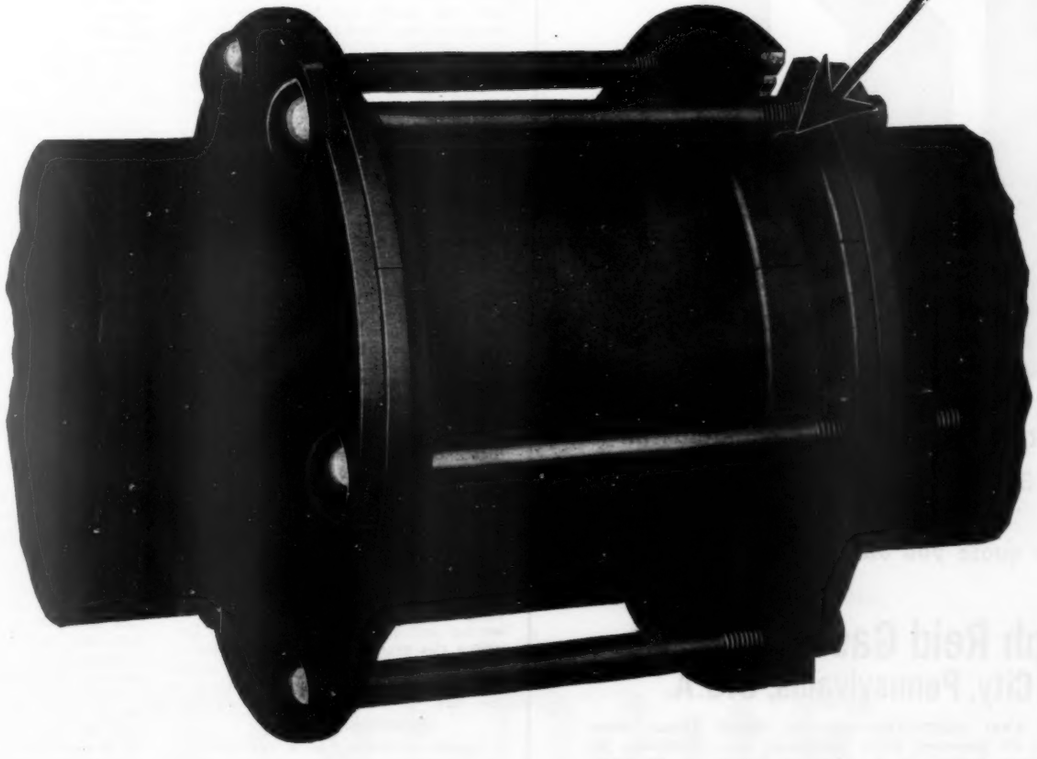
ASKS PERMIT TO OPEN NEW MEXICO GAS WELL

FARMINGTON, N. M., Feb. 7.—The Producers & Refiners Corp. has applied to the Department of the Interior for a permit to open its gas well on public land near here. The well is said to be capable of producing 72,000,000 feet daily. A committee of the Chamber of Commerce hopes to make a contract whereby the Producers & Refiners will furnish gas to Farmington residents for domestic use. The department is said to have decided that the gas must be conserved in the ground unless a market is found for it.

The West Coast Gasoline Co. has started operation of its plant at Aztec. It is using 40 bbls. of crude oil daily in the plant. This is taken from the loading rack at Farmington and trucked to Aztec. The oil comes from Midwest wells on the Hogback structure of the Navajo reservation.

About 100 bbls. of crude per month is being shipped from here to Salt Lake City by the Midwest Refining Co.

It is impossible for flange joints to spread on Dayton Collar Leak Clamps!



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BRANCH SHOP—TULSA, OKLAHOMA

WASTING AVERAGE OF 30 PER CENT OF POWER OF GASOLINE IN MOTORS

That an average of 30 per cent of the power of gasoline used as a motor fuel is wasted by being discharged in the engine exhaust in the form of combustible gases is disclosed as the result of a series of tests conducted by the Department of the Interior, through the Bureau of Mines, on many makes and types of automobiles and trucks. While the presence of these gases may be due to many factors, the outstanding feature of several hundred road tests and gas analyses was that the improper carburetor adjustment was responsible in most cases for the major part of the waste. The average carburetor was found to be adjusted too far on the rich side or, in other words, an insufficient amount of air was admitted with the gasoline, for good economy and proper combustion.

That this condition of rich adjustment exists almost universally is mainly due, the Bureau of Mines considers, to the fact that the carburetor settings giving good power cover a wide variation extending from combination rich to moderately lean adjustments, while those for the desirable combingtion of both good power and good economy are only on the lean side. This, together with the fact that under certain conditions the flexibility of operation decreases somewhat with the lean adjustment, would create a natural tendency toward a rich and more wasteful mixture. Also the markedly rich adjustments found in the summer-time are to a certain extent due to the fact that no change has been made from that used during the cold winter months when a somewhat richer mixture is desirable.

Power of Flexibility

The average automobile driver demands first of all, power and flexibility of operation. He usually sets his carbuetor rich enough to give those properties under the most adverse conditions of driving, as slow speeds in traffic, and even to offset the troubles of a cold motor. In this manner, he usually obtains an adjustment that from an economical standpoint is too rich and unnecessary for the major part of his normal driving conditions, and after his motor has become warmed. This, however, is not manifest in the power but only in the gasoline consumption of which the driver seldom takes special note.

Additional reason for the rich adjustments is that the present day automobile, with its many auxiliary appliances, as hot spot, choke, preheated air and so forth, are but little understood by the average driver. He usually finds by experience that his car best operates when using a certain motor fuel. When he changes to another type or grade he often has trouble in its use or obtains less miles per gallon. He does not seem to realize that in changing from a "high test" grade to a "low test" the carburetor will become leaner, the reverse of this being also true. Also by increasing the temperature of the intake air the mixture will tend to become rich. He merely condemns the fuel because it will not operate at the same carburetor adjustments as his previously used brand. However, in most cases he is merely allowing the carburetor setting and intake air conditions to prescribe the grade or type of fuel rather than exercising the flexibility and adaptability of the carburetor to conform to the fuel.

Adjusting Carburetor

In the adjustment of a carburetor it may be stated that for a certain design there are three major influencing factors, namely the mechanical adjustments, the properties of the fuel, and the intake air heating devices. These are all interrelated and any one will influence the others. From the standpoint of economy the desired combination of these factors is that which will produce the leanest mixture that will give satisfactory operation for the normal or average driving conditions. To obtain this the Bureau of Mines has developed a simple method of analyzing the exhaust gases which gives directly the exact gas-air mixture that is being supplied to the engine. This determination is made when the car is operating on the road at any desired speed, load, or carburetor adjustment. This method also gives a measure of the fuel waste so that adjustments can be made until the waste is decreased as much as possible and still retain good operation. In other words: The motor is checked up on the amount of fuel it is wasting and its feed cut down accordingly.

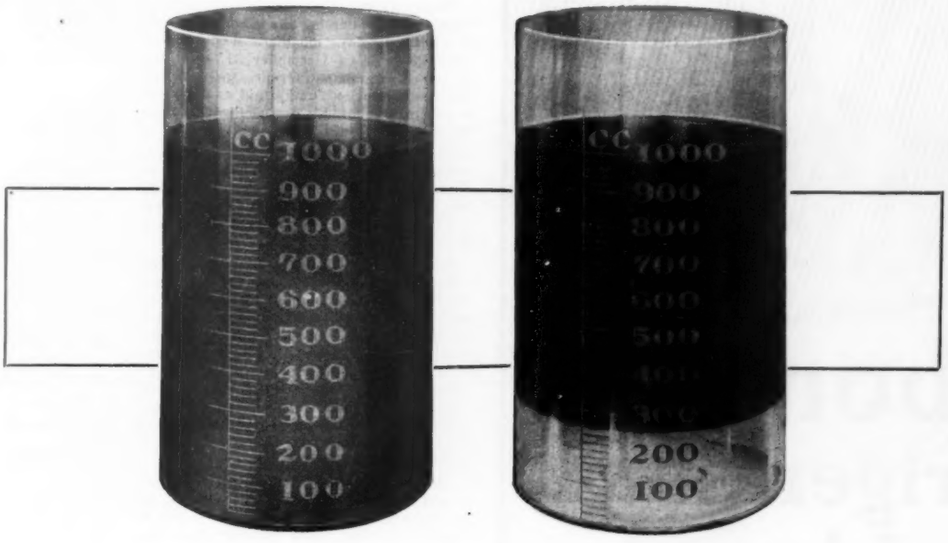
This exhaust gas analysis method for making adjustments has been applied to many makes of cars and trucks and has demonstrated its effectiveness in gasoline saving. In some cases the miles per gallon have been increased more than 40 per cent. A saving of over 22 per cent of the gasoline used per ton mile was effected after adjustment of a fleet of coal trucks in actual operation. A corporation maintaining a fleet of trucks could well afford to employ this method of adjustment. Also it likewise seems that service garages and stations could use the method to a decided advantage over that which is presently employed.

Rules to Be Applied

For the automobile driver who adjusts his own carburetor the method is not so practical, as the trouble of obtaining the apparatus and familiarizing himself with the procedure would not be justified by the occasional adjustment he has to make. While it is not possible, without the exhaust gas analysis method, to outline a procedure that will give definite assurance, the carburetor setting is that which will give the desired combination of flexible operation and economy. Nevertheless there are certain rules, easily applied by anyone, which will tend to decrease markedly the rich adjustments and waste of fuel. After the motor has been warmed up with the preheating air device, if any, set at normal running adjustments, the gasoline feed should be decreased, or the air increased, or both, until the motor back fires, thus indicating a lean mixture. The mixture should be then enriched just enough to prevent the back fire, after which it is tested under normal driving conditions. The mixture may be then further leaned out until unsatisfactory operation begins. For low speeds in congested traffic where greater flexibility is needed the choke should be necessary in the majority of cases where the carburetor has been economically adjusted.

The ideal carburetor is one that will give moderately rich adjustments at low speeds where greater flexibility is needed and leaner adjustments at the higher speeds where the need for flexibility decreases. The majority of the makes of carburetors tend to fulfill this requirement, but there are some that do practically the reverse, that is, they give a lean mixture at low speeds and rich mixtures at high speeds. This necessarily requires a road test to determine the suitability of the adjustment made. In most cases when a change in grade or type of fuel is made it necessitates a new adjustment. Also it is advisable to make adjustments to meet the difference of summer and winter conditions. If there is a dash control on the air intake heating device, it should be adjusted or regulated to give a large amount of heated air in warming up the motor and then decreased for ordinary driving because excessive preheating of the intake air will tend to enrich the mixture.

It has been demonstrated that by following these suggestions at least half of the 30 per cent of gasoline wasted in the exhaust gases can be saved. Publications dealing in detail with this subject can be obtained by writing to the Department of the Interior, Bureau of Mines.



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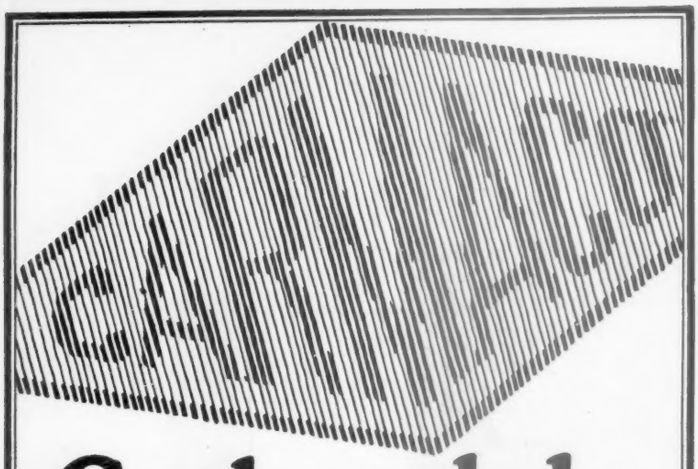

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Carbondale was the pioneer in this field and have willingly shared this experience with refiners. This is why the Carbondale nameplate will be found on a large percentage of the refrigerating equipment in refineries today.

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Carbondale, Pa.

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Half Million Shares Of New Jersey Stock Owned by Employes

With 537,237 shares of Standard Oil of New Jersey common stock to the credit of 14,100 employe members of stock purchase plan as of December 31, last, employes of the company represented in the stock subscription fund stand as the sixth largest stock holding of the big Standard Oil organization.

This employes' stock ownership fund is exceeded in size only by the holdings of John D. Rockefeller, Jr., Northern Finance Corp., Rockefeller Foundation, Harkness estate and General Education Board.

Holdings of employe subscribers represent about 2.68 per cent of the New Jersey's total common stock issue. The aggregate of the five above named holders, on these records, was 29.1 per cent of the total common issue. With 1 per cent each held by Laura Spellman Rockefeller Memorial and Mrs. Edith McCormick Rockefeller, the employe subscription fund and these seven other stockholders have an aggregate of 31.78 per cent of New Jersey common stock.

This is the last year of the five-year period for the employe stockholder plan inaugurated by the company in 1921. Under the plan, each employe can subscribe up to 20 per cent of his salary, and for each dollar so subscribed the company adds 50 cents. The money is used by a board of trustees to buy stock for account of the employe fund. Each year the price is fixed at not exceeding the average pric in the last three months of the preceding year. Stock is purchased in the market and held in trust until the expiration of the five-year period. At the end of 1925 the stock will be transferred to individual employes.

As of December 1, 1924, there was an aggregate of $21,000,000 in the fund, represented by 537,237 shares of common stock for the account of 14,100 subscribing employes. This stock is worth about $24,600,000 at current market prices. It is a substantial increase from the $13,143,349, represented by 385,259 shares, held in the fund on December 1, 1923, due to a substantial gain in subscriptions last year.

Price fixed for 1925 subscription of $35 a share is the second highest in the five-year period, having been exceeded only by the price of $39.20 for 1923. In 1924 it was $33, in 1922 it was $32.20, and $31 a share in 1921.

Average subscription price for the five-year period works out $34.08 a share. The company's subscription to the fund of 50 cents for each dollar put in by the employes reduces employes' net cost by one-third. This would reduce cost by $11.36 a share from the five-year average, to a net figure of $22.72 a share.

A further provision of the plan is that employes withdrawing before the five years expire receive the money put in plus 6 per cent interest, but they do not share in the money put in by the company. This money goes into the general pot, and the numerous withdrawals for different reasons have resulted in the fund being enhanced by about $1,000,000. This will further reduce average cost a share for the employe stock.

VENEZUELA'S OUTPUT

Venezuela produced 1,331,349 bbls. of oil in December, an increase of 214,173 bbls. over previous month, according to the Venezuela News Letter Service. Total production in 1924 was 9,006,525 bbls. (partly estimated), compared with 3,650,000 in 1923.

The following table shows itemized summary of 1924 production:

	Bbls.
December	1,331,349
November	1,117,176
October	958,000
January-September	4,700,000
Consumed in drilling and refined at San Lorenzo—estimated	900,000
Total 1924	9,006,525
Total 1923	3,650,000

MEXICAN LIGHT UP, HEAVY OUTPUT DOWN

Heavy oil production in Mexico totaled 1,679,000 bbls. in the week ended January 24, a decrease of 62,000 bbls. from the previous week. Light oil output was 917,000 bbls., an increase of 22,000.

Production (in barrels) for the past two weeks follows:

	Jan. 24		Jan. 17	
	South	Panuco	South	Panuco
Mex. Pet.	543,000	341,000	532,000	293,000
S. O. of N. J.	25,000	422,000	25,000	350,000
Mex. Seaboard	22,000	268,000	20,000	331,000
Royal Dutch	9,000	257,000	8,000	269,000
Sinclair	10,000	172,000	2,000	171,000
Mex. Eagle	161,000	12,000	137,000	13,000
Gulf Oil Corp.	56,000	48,000	56,000	54,000
Atlantic Gulf	26,000	.....	26,000	.....
Penn-Mex Fuel	16,000	.....	16,000	.....
The Texas Co.	4,000	12,000	4,000	13,000
Miscellaneous.	45,000	147,000	69,000	259,000

Toteco Pool production totaled 110,000 bbls., an increase of 2,000 bbls., Gulf Oil Corp. producing 51,000 bbls., Mexican Petroleum Co. 37,000 and Mexican Seaboard Oil Co. 22,000.

H. L. DOHERTY SEES STABILIZATION AHEAD

Henry L. Doherty, addressing the San Francisco Investment Bankers Club said:

"If we can exercise reasonable control over production of oil as is now done with other mineral products, we can increase and sell what oil is produced to the best interest of society. The oil industry as a whole can be made to earn more than $1,000,000,000 a year in excess of what it is earning.

"For those interested in problems which relate to artificial and natural gas business or to oil," he said, "we will have some very interesting things to tell from time to time which have not yet reached the point where we care to talk about them. In my opinion there is ample justification for the boom market we have had, and no reason to believe we have yet hit top prices. It is only natural to expect several minor reactions before reasonable stabilization is reached, but when we do reach point of stabilization, by continued advance of our present markets, I believe we shall be on a higher price level or lower rate of return."

EASTERN FIELDS

(Continued from Page 54)

DeKalb district, the Hope Natural Gas Co. is starting on the W. G. Bennett farm. The same company is rigging up a second test. In Center district, the Valley Oil & Gas Co. is building a rig on the William Bennett farm.

The fourth sand development in North Strabane Township, Washington County, is proving a great disappointment. Located north of the good producer on the R. G. Lutton farm, Brown & Conklin have now drilled their test on the C. A. Thompson farm through the fourth sand and dry. Of the last four completions in this development, one is a light pumper and three dry holes. The next well due is Benedum & Trees' test on the Quail Sisters farm.

DEATH OF JOHN C. WELCH

John C. Welch, who was prominent in the early development of the oil industry in Oil City and western Pennsylvania, died in a hospital in Kansas City, Mo., January 29. He was born in Angelica, N. Y., May 12, 1840, and after serving in the Civil War from 1860 to 1865 he moved to Oil City, Pa., where he published reports on conditions of the petroleum industry, which were widely recognized not only in this country but abroad.

In the 80's Mr. Welch and his family took up their residence in New York. He became known as a writer of scientific and economic subjects and contributed various articles to newspapers and magazines.

Mr. Welch is survived by his widow, Mrs. Lida M. Welch, the daughter of Robert McNair, who was prominently identified with the early development of the town of Butler, Pa., also by three sons, W. M. and J. H. Welch of Tulsa, Okla., and J. R. Welch, of Ponca City, Okla.

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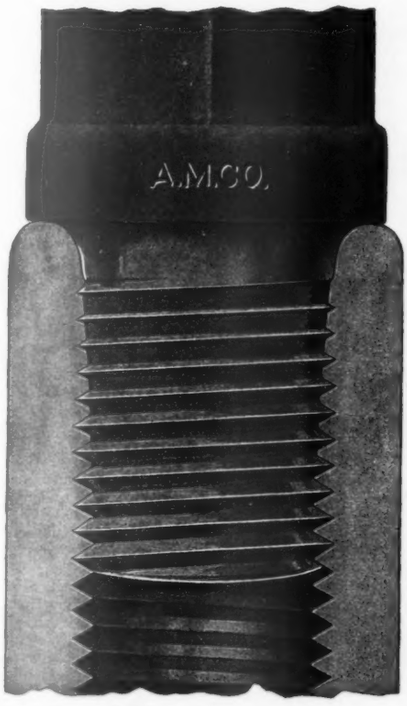

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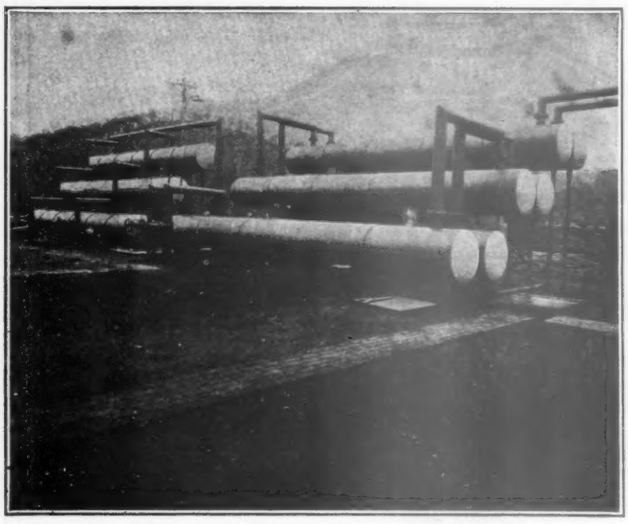

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U. S. TO SUPPLY LESS PERCENTAGE OF WORLD'S OIL IS BELIEF NOW

By N. O. Fanning

NEW YORK, Feb. 2.—Many close students of the world oil situation believe that from now on the United States will contribute a smaller percentage of the world's oil needs year by year. Even though production should increase the immense possibilities of the fields of Venezuela, Colombia, Peru, Russia, Persia and the Dutch East Indies, to mention only a few fields of immediate potentiality, are expected to increase their production at such a fast rate that their contribution will greatly increase with relation to the world's total.

The realization of such a development would be in line with predictions made by more than one conservative leader in the oil business. It would bring about a gradual change in all branches of the oil industry. It would throw into greater relief refining capacity on the American seacoast, as crude would have to be imported in larger amounts. It would enormously increase the need for ocean-going oil tanker tonnage, because of the necessity of carrying both crude and refined oil across the seas in larger amounts.

The sudden movement toward building new tanker tonnage marks the beginning of the shift toward foreign fields. Foreign yards, especially, are busy, because ships under other than American registry are expected to have the advantage in carrying crude and refined oils between foreign countries, as well as from the United States to other Nations. Both foreign and American companies are active in building tankers to go under foreign registry. All of such building is in foreign yards.

It is only natural that foreign oil companies should have the advantage in ownership of tanker tonnage under foreign registry. This fact, however, presents a serious problem to American companies, especially those now doing a big foreign business in competition with Anglo-Persian Oil and the Dutch-Shell combine.

Estimates of the real power of the principal tanker fleets of the world must necessarily be approximations. However, figures may be arrived at which give added significance to the trend toward development of foreign fields and foreign markets.

Averaging six round trips per year per tanker, one way in ballast, the world's total tankers could carry approximately 345,000,000 bbls. of oil annually, including those engaged in the longer voyages between the United States and Europe and the Far East, as well as those engaged in carrying oil from the Far and Near East to Europe, and from South and Central America to Europe.

In 1924 the world's production of crude oil was approximately 1,000,000 bbls., of which 717,000,000 bbls., or 71.7 per cent were produced in the United States.

If all American tankers were engaged in carrying American oil between American ports, there would remain tankers under foreign registry aggregating 2,748,991 gross tons with the ability to carry about 181,000,000 bbls. annually, to take care of foreign output of 283,000,000 bbls. and exports from the United States of at least 100,000,000 bbls., or an aggregate of 383,000,000 bbls.

The amount of oil generally carried between American ports does not exceed 150,000,000 bbls. a year and this year it is not likely to reach more than 200,000,000 bbls. allowing for a large gain in the movement from Gulf to Atlantic ports and a probable falling off in shipments from Pacific Coast to eastern ports.

The net relation of capacity to actual load if foreign tankers carried foreign oil and all exports from the United States, while American tankers carried only intercoastal oil, would be: (in barrels):

	Annual Capacity	Amount of Load Available
Foreign tankers...	181,000,000	383,000,000
American tankers .	165,000,000	200,000,000

A revision of these figures would have to be made, however, as American vessels could average at least 10 trips a year in the intercoastal trade, instead of six. Therefore, the final estimate of capacity as related to amount of load which they would be called upon to carry, would be about as follows:

	Capacity	Estimated Load
Foreign tankers ...	181,000,000	383,000,000
American tankers .	274,000,000	200,000,000

In connection with the foreign tanker situation, and the tendency toward development of foreign fields and expansion of the export trade, the following estimates show probable carrying capacity of the principal tanker fleets, based on an estimate of an average of six round trips per year:

	Gross Tons	Annual Carrying Capacity
Standard of N. J. (Am.)..	179,346	11,614,000
Dutch-Shell combine (Br.).	655,039	43,230,000
Anglo-Persian Oil (Br.).	398,329	26,268,000
British Admiralty (Br.).	179,411	11,814,000
Anglo-Am. Oil Co.(Am.).	114,331	7,534,000
Standard of N. Y. (Am.)	67,821	4,422,000
Tankers, Ltd. (Br.).....	69,868	4,554,000
British Mexican Petroleum Co. (Br.)	48,245	3,168,000
A/S Tankfart (Nor.).....	45,888	2,980,000

The abbreviations in parentheses indicate nationality of company, not registration of vessels. All nationalities and registries are the same, however, except in the case of the American concerns.

There is now a rush to build additional tankers under foreign registry. The Standard Oil Co. of New Jersey has under construction about a dozen tankers for its foreign subsidiaries. But foreign companies are also building additional tonnage, so it is a question whether the proportion of foreign tonnage owned by American companies will change much. The Shell Transport & Trading Co., partner in the Dutch-Shell combine, is alone building eight additional tankers.

The following table shows principal foreign tanker fleets of the world with estimated carrying capacity per trip, in barrels:

	No. Ships	Gross tonnage	Carrying capacity
Dutch-Shell—			
Anglo-Saxon Petroleum Co.	60	330,602	3,630,000
Asiatic Petroleum Co.	2	11,134	121,000
La Corona Petroleum	4	15,202	165,000
Eagle Oil Transport Co.	35	298,101	3,278,000
	101	655,039	7,194,000
Anglo-Persian—			
British Tanker Co.	65	379,943	4,169,000
Burmah Oil Co.	4	18,386	198,000
	69	398,329	4,367,000
British Admiralty	45	179,411	1,969,000
Anglo-American Oil Co.	21	114,331	1,254,000
Standard of New York	12	67,821	737,000
Standard of New Jersey—			
American Petroleum Co. (Holland	2	10,878	110,000
American Petroleum Co. (Belgium)	1	8,301	88,000
Societa "La Columbia" (Italian)	5	29,083	319,000
Det Danske Petroleum (Danish)	1	8,548	88,000
D. A. P. G. (German)	2	17,900	187,000
Operated by Reparations Commission	4	23,430	253,000
Imperial Oil, Ltd. (Canada)	11	64,166	704,000
International Petroleum, Ltd.	2	17,040	187,000
	28	179,346	1,936,000
British Mexican Petroleum	12	48,245	528,000
A/S Tankfart (Norwegian)	7	45,888	495,000
Tankers, Ltd.	10	69,868	759,000

The foregoing table represents a revision of the figures given in a recent issue of The Oil & Gas Journal, in which some subsidiary fleets were omitted.

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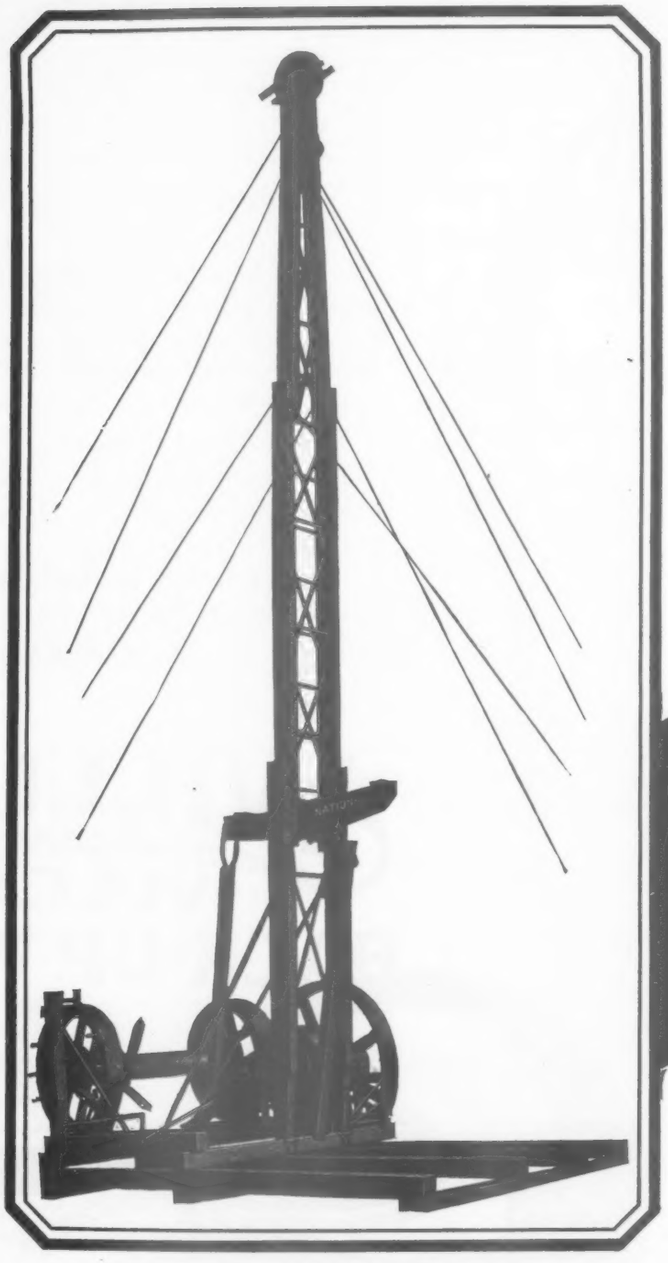

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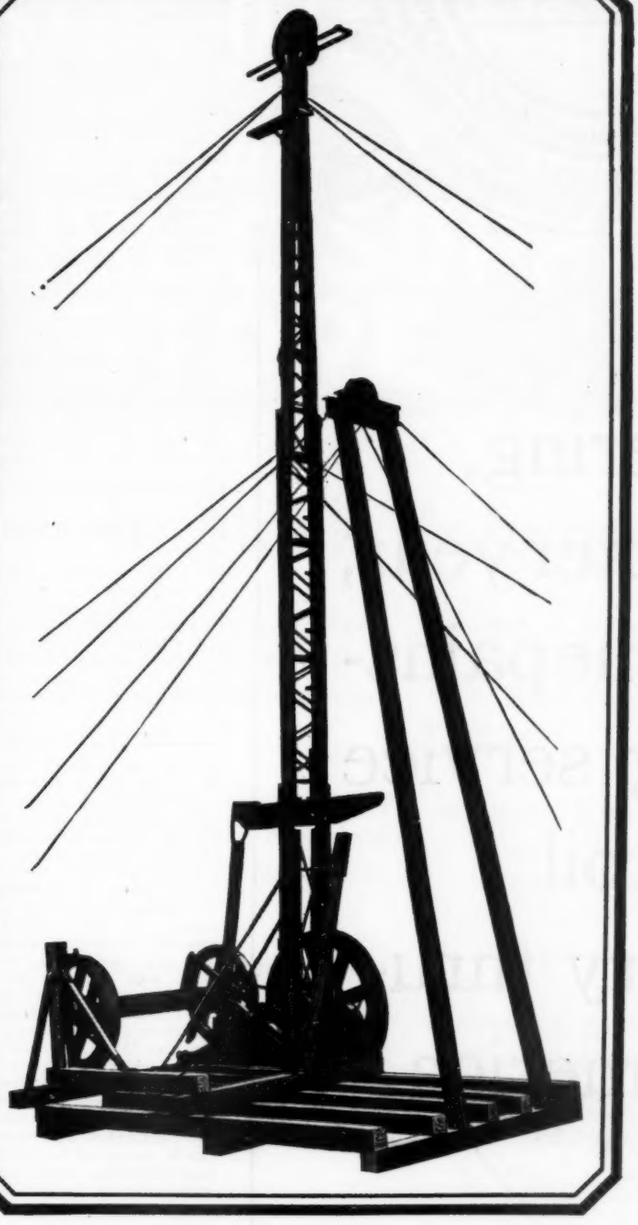

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GAS MASKS FOR USE OF WORKMEN EXPOSED TO PETROLEUM VAPORS

Vapors of petroleum, gasoline and other products of petroleum—all of which are termed petroleum vapors in this article—cause anesthetic effects when inhaled. "Gasoline jags" are frequent among workers in oil refineries, dry-cleaning establishments, rubber factories and other plants using gasoline. Occasionally men are overcome and some have died in consequence of breathing the vapors. Aside from the hydrocarbon vapors themselves, some petroleums such as Mexican and that from the Ohio field contain in solution, and evolve when exposed, hydrogen sulphide gas, which is exceedingly poisonous when breathed, quickly causing unconsciousness and death.

Men sometimes have to enter tanks, tank cars, bunkers of ships, or other containers that hold vapors of gasoline or petroleum, in order to make inspections, repairs, or adjustments. Of course, it is best when the work is extensive to clean and ventilate the space thoroughly in order to insure a supply of pure air before workmen enter; but sometimes this is not feasible or is inordinately expensive when the job is small. Under such circumstances the gas mask, the hose mask, or the self-contained oxygen breathing apparatus may give adequate protection for completing a job with a minimum of time, labor and expense. When tanks are cleaned it is sometimes necessary to enter them before the vapors are wholly eliminated; a little protection then will usually enable men to work in comfort, whereas otherwise the vapors may be very annoying even if not especially dangerous. Small respiratory apparatus, such as the gas mask, is often helpful to factory workers who encounter similar vapors.

This article gives the results of work on the degree of protection afforded by the canister type of gas mask, the hose mask, and the self-contained oxygen breathing apparatus against gasoline vapors and the like. In general, the gas mask with canisters containing fresh, dry, activated charcoal gives protection for a limited time against hydrocarbon vapors in concentrations not exceeding 5 per cent in air. Higher concentrations may quickly penetrate a canister. The hose mask gives good protection against all concentrations that a man's skin will bear. The thin rubberized bags of the self-contained oxygen breathing apparatus can be penetrated by gasoline vapors, but bags of rubber one-sixteenth inch thick exclude them.

Gas masks, hose masks, and self-contained oxygen breathing apparatus were tested for respiratory protection against petroleum vapors and hydrogen sulphide. Conclusions are:

(1) The canister type of gas mask containing 600 c. c. of dry high-grade activated charcoal protects a wearer one hour or more against 1 per cent of gasoline vapor in air which is otherwise normal; that is, air having no deficiency of oxygen. It is not safe to use the canisters in uniform concentrations of gasoline vapor greater than 2 per cent nor in nonuniform or stratified concentrations averaging more than 2 per cent or anywhere exceeding 5 per cent. Moisture in charcoal reduces its capacity for petroleum vapors, therefore it should be kept dry. Used charcoal may be revivified by drawing air at 105 degrees C. through a canister of two hours or more according to the size of the canister. Thus a canister may be used repeatedly.

(2) The 600-c. c. charcoal filled canister mask protects against 1 per cent H_2S in air for 3½ minutes. Soda lime is a much better absorbent for H_2S, the 600-c. c. canister filled with soda lime lasting 17 minutes. Soda lime, however, does not protect against petroleum vapors and can not be regenerated. Mixtures of H_2S and petroleum vapors in air are adsorbed by charcoal, but each in proportion to its concentration reduces the adsorbed capacity of the charcoal for the other. Canisters containing both soda lime and charcoal adsorbent are of advantage when petroleum vapors and hydrogen sulphide are both encountered in considerable proportions. Gas masks should not be used in air exceeding 2 per cent of hydrogen sulphide or hydrogen sulphide plus petroleum vapor.

Hose Type of Mask

(3) Hose masks protect against any irrespirable atmosphere that the wearer's skin will bear. Several types have been described. They are especially useful in tanks, apparatus, or situations where the distance from pure air is relatively short. A wearer can draw air by inhalation through 50 to 100 feet of ¾-inch or larger hose without undue effort. However, a blower of the fan type that delivers air under either direction of rotation and does not when stopped retard the passage of air is of advantage. Compressed air, if available, may be used. Blowers reduce the effort imposed upon the wearer; also if leaks develop in the apparatus the leakage is outward. The need of an attendant to operate a blower promotes safety in an emergency. In fact, persons should not enter dangerous atmospheres unless attended by preferably two or more strong and competent persons to act in case of emergency, and the use of life lines attached to the body is advisable.

(4) Self-contained oxygen breathing apparatus having breathing bags coated with rubber at least $\frac{1}{16}$-inch thick protect against any irrespirable atmosphere for periods as long as two hours, which is the nominal time for a charge of oxygen in the larger apparatus. Thinly rubberized bags may be quickly penetrated by petroleum vapors. Both Gibbs and Paul apparatus, which have been officially approved by the Bureau of Mines for mine rescue and recovery work, are not advised for use in petroleum vapors for periods exceeding 10 miutes, because the vapors may penetrate the thin bags. After this period, these bags should be aired for eight hours to free them of absorbed vapor.

(5) The McCaa oxygen apparatus was recently devised by the bureau especially for use in petrolueum vapors. Its essential features are its light weight, a rubberized bag having walls thick enough to withstand petroleum vapors for at least two hours, and an automatic oxygen supply controlled by the rate of consumption. Two-hour and half hour sizes were made.

Limitations of Canister Type

The canister-type gas mask, the type commonly known since the World War, is now widely used for protection against many gases and vapors encountered in civil life. This mask, as used for military purposes, has inherent limitations exceeding 2 to 5 per cent in air; it be-

BUREAU OF MINES ON PETROLEUM VAPORS

The constant danger to which workmen around oil tanks, refineries and natural gasoline plants are exposed because of the presence of petroleum vapors, and the inherent limitations of the type of gas mask used by the Army during the war, led the Bureau of Mines to conduct extensive experiments to determine the best means of protection against these vapors. The investigations of the bureau were conducted under the direction of S. H. Katz and J. J. Bloomfield, and the results of the experiments are embodied in the accompanying article.

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comes saturated after a certain amount of gas vapor is taken up; it does not absorb ammonia gas or carbon monoxide; and it does not supply oxygen. The Bureau of Mines called attention to these deficiencies as soon as the mask was taken up for civilian purposes. Since then the bureau has developed the "universal" gas mask that protects against ammonia, carbon monoxide, and all other poisonous gases; but the limitations regarding high concentrations of gas and inability to supply oxygen still hold for all canister gas masks.

The canister of the Army mask contains a granular mixture of soda lime and activated charcoal. Soda lime is especially useful for absorbing acid gases, such as hydrogen sulphide, sulphur dioxide, phosgene, chlorine, and many others. It has no value whatever against organic vapors, which include gasoline and petroleum vapors, benzine, aniline, chlorpicrin, and the like; activated charcoal absorbs (more correctly, adsorbs) these. Hence, when a mask is intended for use solely against a vapor such as gasoline, it gives longer life and better service if filled with charcoal only. The ability of charcoal to adsorb gasoline vapor has led to its use in extracting gasoline from natural gas; its action there is entirely similar to its action in removing gasoline from air breathed through a canister. Because a certain quantity of charcoal can take up only a limited amount of gasoline at a limited rate, a gas mask will allow vapors to penetrate after the charcoal becomes saturated or when the vapor concentration exceeds the activity of the charcoal to restrain and adsorb it.

Effect of Inhaling Vapor

Inhalation of gasoline and other volatile hydrocarbons given off by petroleum causes headache, dizziness, and frequently an intoxication in which the victim becomes excited and hysterical. Experiments made by the Bureau of Mines have shown that the odor of gasoline is noticeable in inhaled air containing 0.03 per cent gasoline; in air containing 0.07 increasing to 0.28 per cent gasoline a man became dizzy at the end of 14½ miutes; in a concentration of 1.13 to 2.22 per cent for three minutes a man became so dizzy that he was compelled to hold fast to a table to stand; in a concentration increasing from 2.22 to 2.60 per cent, a man became dizzy after only 10 to 12 breaths. Lehmann gives 15 to 25 mg. of gasoline to a liter of air, corresponding to 0.13 to 0.71 per cent, as the maximum that can be inhaled within 30 minutes to one hour without causing serious disturbances. More recently Haggard showed that, when concentrations were gradually increased from zero, dogs exhibited each of the various physiolgical symptoms at practically the same concentrations, although the time factor varied somewhat. Thus, in several experiments in which dogs were placed in pure air to which gasoline vapor was added gradually, convulsions always occurred when 1 per cent concentration of gasoline vapor was attained, although the periods of exposure varied from 12 to 35 minutes; this was followed by immobility when the concentration reached 1.6 per cent after total exposures of 16 to 44 minutes. One of the tests was carried further; anesthesia resulted after a total exposure of 28 minutes, at which time the concentration was 2.3 per cent. Four minutes later this dog died. The final concentration was 2.6 per cent. The stage between unconsciousness and death is thus very narrow, making the vapors of the higher hydrocarbons dangerous anesthetics.

High concentrations of the vapors quickly overcome the victims, causing complete insensibility and then death. However, when a victim still living is removed to fresh air, he usually recovers. The Schaefer prone pressure method of artificial respiration should be used to resuscitate if breathing is shallow or has ceased. Recovery is sometimes accompanied by severe headache and sometimes by nausea.

Should Analyze Gases

A man on a new or unusual job often may not be aware of the concentration of the vapor, so safety demands that the concentrations be determined by chemical analysis to assure that a canister gas mask is adequate before the person's life is jeopardized. If a chemist is not available, or time for analysis is lacking, it is better to use a hose mask or self-contained oxygen breathing apparatus for protection. A generally safe rule to follow is to wear a canister gas mask for protection from petroleum vapors only when a man can work for a short time without respiratory protection.

At one refinery, at least, canister gas masks are now used by men working at the "rack" for filling tank cars. The cars, containing at times a little residual gasoline, arrive at the rack with the top manhole and the bottom drain pipes open. Before these tanks are filled, men enter and inspect them. Formerly the men used no respiratory protection, but held their breath or breathed as little as possible while in the vapors. Gas masks with charcoal-filled canisters of 600 c. c. size are now used continually on this job. Inspection of a car takes from one to three minutes, and canisters in service last several weeks before replacement.

As is well known, charcoal adsorbs more gases and vapors at lower temperatures and its adsorptive capacity decreases at higher temperatures. Hence, attempts were made to regenerate canisters by driving off the adsorbed gasoline with a current of heated air. Excellent results were obtained. Air at 100 degrees C. drawn through at the rate of 1 cubic foot per minute regenerated the 600 c. c. canisters in two hours; tests for life nearly equaled the original or were greater when moisture in the charcoal was reduced simultaneously with the gasoline. A 3,600 c. c. canister regenerates similarly in 10 hours.

Can Improvise Suction

Laboratory equipment may not be available where gas masks are used, but suction can be improvised with steam or water-jet aspirators, and hot air or gases of proper temperature may be drawn from stacks or around furnaces or apparatus. The gases should be free from dust, smoke and suspended matter. Steam can not be used, because it leaves moisture in the charcoal, greatly reducing the adsorbent capacity. Cotton-wool filters dampened by wet steam pack together in a canister and thus increase the resistance to breathing so much that the canister is useless.

The cost of regenerating charcoal-filled canisters is a fraction of the cost of new canisters, hence considerable saving may result from regeneration of gas masks used against petroleum vapors. Canisters containing a chemical adsorbent can not be regenerated.

As previously stated, certain crude oils from the Lima Field in Ohio, from Canada, and elsewhere, notably some from Mexico, contain hydrogen sulphide gas (H_2S) in solution, which is given off when the petroleum is heated or exposed to the air. Since H_2S is much more poisonous than petroleum vapors, more pains should be taken to avoid it.

Effects of Hydrogen Sulphide

Hydrogen sulphide has an exceedingly disagreeable odor (like rotten eggs) when greatly diluted in air. At higher concentrations the odor disappears, due to anesthetic effect on the olfactory nerves; however, at concentrations above the odoriferous, a metallic taste persists that may be noticed by persons who are accustomed to the gas. Hydrogen sulphide is intensely poisonous and quickly causes unconsciousness and death because of its paralytic action on nerve centers controlling respiration and the heart. Sayers, Mitchell, and Yant found that 600 parts per million (0.06 per cent) of H_2S in air renders a dog unconscious in about 2 minutes and kills it in about 15 minutes. Lehmann determined that persons were affected slightly after several hours' exposure to concentrations of 100 to 150 parts per million, and that 1,000 to 2,000 parts per million are quickly fatal to men or animals. Its lack of odor in deadly concentrations makes hydrogen sulphide very treacherous. A number of men in the petroleum industry have died from inhaling it.

Based on these tests, gas masks can be recommended for use in concentrations

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If asked to take this phrase seriously, is there any Producer who wouldn't answer, "Tubing Accidents"? Is there anything in production experience that takes more joy out of life or administers more grief to the bank roll?

Loss averages 1 to 20 thousand dollars per accident. GUIBERSON Tubing Catchers, spelling positive protection, cost only $90 to $150 per well. Every month additional companies adopt the policy of placing these catchers "on every pumping well." Better be safe than sorry!

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GUIBERSON

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Bell Peerless
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Plunger Pump

A Plunger Pump with steel incased Barrel.

Combination of PLUNGER with BELL FEATURES

PLUNGER protected from SAND

In operation over sixty days in Burbank well—against best time of other Pumps four days.

Ask Your Dealer

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of H_2S in air averaging not over 1 per cent and not exceeding 2 per cent in irregular concentrations. The heat developed in canisters serves to indicate to the wearer the proportion of H_2S encountered. On numerous occasions members of the Bureau of Mines have, with excellent results, used gas masks for protection from hydrogen sulphide during experimental work. The concentrations encountered in this manner, however, have not been high—0.3 per cent being the highest range.

Bnefits of Hose Mask

The hose mask consists of a face mask or a mouthpiece attached to a long hose through which the wearer inhales fresh air. The length of hose limits the distance he may go from pure air into irrespirable gases and vapors. With three-fourths to 1-inch hose the distance may range up to 100 or 150 feet without causing undue exertion in drawing breath. Longer lengths of hose may require a pump or source of compressed air to force pure air to the wearer. The hose mask is not limited as regards the concentration or kind of irrespirable vapors or gas that surround the wearer; it protects against any atmosphere that the skin can endure. A number of forms of hose masks have been used for many years.

Hose masks are simple, contain no chemicals nor parts that are easily used up, and require no replacements until worn out. There is practically no expense or upkeep, and there are no limitations as to the kind of atmosphere in which they give protection. Hose masks are especially useful around refineries, tanks, and apparatus for storing, handling, and shipping petroleum products and similar volatile liquids, because the wearer must penetrate relatively short distances from pure air.

Air Blowers for Hose Masks

Some hose masks are equipped with small hand-driven rotary blowers at the pure-air end of the hose. Such a bowler should be of a type to force air with other direction of rotation and should cause no restriction to natural breathing by its failure to operate. Blowers are to be recommended because they exert positive pressure throughout a mask, and, should any leaks occur at points or in the fit of the face piece, the leakage is outward—thus eliminating danger. Operation of the blower requires an attendant but this requirement increases safety; in fact, one or more attendants should always be at hand whenever a man enters an irrespirable atmosphere.

The Bureau of Mines recommends that a man entering a tank or other apparatus should always have a life line attached to his person and held outside by at least two strong men who can remove him in an emergency. Life lines are always expedient whether the respiratory apparatus be hose mask, canister gas mask, or self-contained oxygen breathing apparatus. If the harness is not arranged for attaching life lines, they can be tied around the waist.

Information given the Bureau of Mines by seven large oil-refining companies shows that the hose mask is most favored for protecting men entering tanks and for general use inside of refining apparatus. Only one instance of poor protection was reported, attributed to improper construction of the mask; in all the other instances reported the men worked with perfect protection for periods of time up to an hour or more. One company has designed, for its own use, a hose mask that has the Tissot face piece and belt, and a flexible metal hose 1½ inches in diameter and 75 or 150 feet long. Air is drawn through the hose by the wearer himself. The hose is wound on a special reel and the apparatus is carried on a small autotruck when wanted in emergencies.

The McCaa self-contained oxygen breathing aparatus of the half-hour type was developed by the Bureau of Mines at the request of the Navy Department especially for use in petroleum vapors.

Oxygen Breathing Apparatus

An oxygen breathing apparatus differs from a gas mask or a hose mask in that it carries, compressed into a tank at a pressure as high as 120 atmospheres (1,800 pounds per square inch), a supply of pure oxygen gas for the wearer. The oxygen is released through a series of valves, tubes, and rubberized bags, and inhaled through mouthpiece. In early types of oxygen breathing apparatus a "helmet" inclosed the head, but in late types the helmet is not used because it is dangerous.) The exhaled oxygen and carbon dioxide pass through a container of alkaline absorbent—caustic soda or soda-lime granules—which removes the carbon dioxide; the unused purified oxygen mixe withd fresh oxygen from the tank is then rebreathed. The construction and performance of various self-contained oxygen breathing apparatus have been described elsewhere by the Bureau of Mines.

The weight of the half-hour apparatus is about 17 pounds and of the 2-hour apparatus only 30 pounds. The latter is the lightest oxygen apparatus yet made for its respective time of usage.

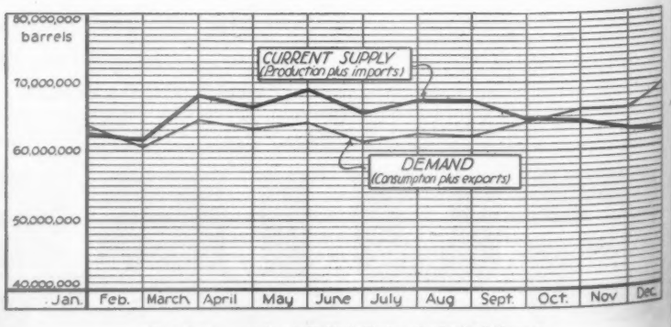
At the present time, the McCaa apparatus is not commercially available, but the Navy Department is requesting bids from manufacturers for constructing, according to McCaa designs and specifications, hauf-hour apparatus for use in the Navy. Only one type of apparatus now on the market—the Fleuss or Proto 2-hour apparatus—has a breathing bag with wells thick enough to withstand penetration by petroleum vapors during a 2-hour period.

The Bureau of Mines advises for the present that self-contained oxygen breathing apparatus, such as the Paul or the Gibbs, having thinly rubberized bags may be worn in petroleum vapors for periods not exceeding 10 minutes. Then the breathing bags should be removed and aired for a day in order to rid them of adsorbed vapor.

GAS FOR PARAGOULD, ARK.

OKLAHOMA CITY, Okla., Feb. 7.—Henry Faulkner of Kansas City has advised city officials of Paragould, Ark. that eastern capitalists he represents have accepted a franchise for the manufacture and distribution of artificial gas in Paragould. Representatives of the investors are to go to the Arkansas city soon to make preparation for construction of the plant. It is reported the plant will cost about $900,000.

SUPPLY OF AND DEMAND FOR CRUDE OIL IN 1924



Based on reports of United States Geological Survey.

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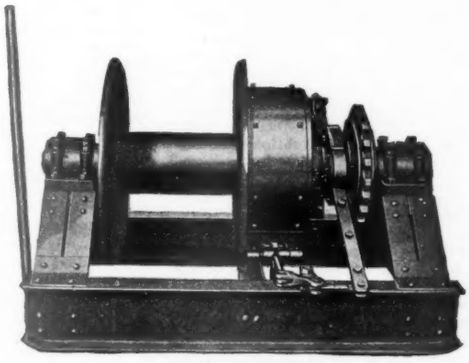
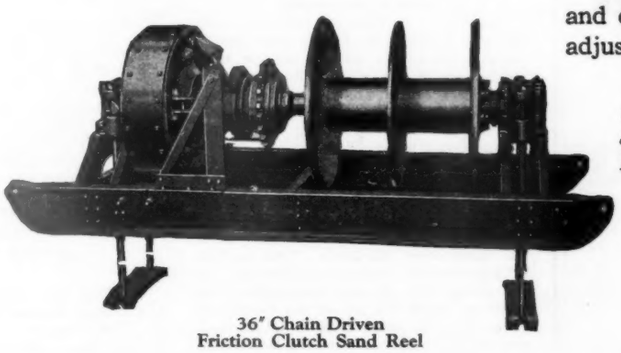
The above is taken verbatim from one of the many reports in our files, all indicating the perfect working of Parkersburg Chain Driven Sand Reels and Bailers.



26″ Friction Clutch
Chain Driven Bailer



36″ Chain Driven
Friction Clutch Sand Reel

And perfect working of these Machines means economy wherever they are used.

Economy of time because the bailing operation is speeded up to an almost unbelievable degree.

Economy of materials as there is no contact with or wear on the Band Wheel.

No damage to belt, and sand line is safely stored and protected.

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The line includes a size and type for both Rotary and Cable Tool work and for depths of from 500 to over 3000 feet.

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"UNITED" IRON WORKS INC. FOR SERVICE

TULSA KANSAS CITY DALLAS

OKLAHOMA NATURAL GAS CO. PROBLEMS

(Continued from Page 46)

that well. Rather than to pull the well hard for the first few days of the month, take its percentage and then shut it in for the remainder of the month. The field foreman tries to take a daily amount out to keep the wells in the line for the entire month. In some fields where there are low and high pressure wells we try to use the low wells on days when the line pressure is low and the high pressure wells as boosters for days when the lines must be kept packed at a high pressure. An example of the handling of high and low pressure wells may be seen at the Norge or Chickasha Field where the low pressure wells from the Duncan and Norge Fields are put into a suction line to the Norge compressing station and the high pressure wells by-pass the station into the discharge line.

Handling Water

Not so very long ago the matter of handling water which crept into the sand along with the gas was not only a very wasteful but an inefficient method of dealing with the subject. The old method was to open gates on the well and allow the gas to blow into the atmosphere until it had relieved itself of all water. Of course the gas pressure forces the water out of the hole and from a small amount to a great amount of gas escapes with the water. If this procedure is repeated daily you can appreciate the amount of gas wasted in the course of a month. But with this method of relieving the well of the water it is not long before the water gets the best of the situation and the well is "dead." But with the cooperation of the producer the gas company now steps in and tubes the well so as to take care of the water. The size of the tubing is determined by the amount of gas which we expect to take from the well, for we use the tubing for the double purpose of taking what gas we can from the well in addition to getting out the water. The tubing would be of no advantage to us if we continued to take gas out around it and tried to blow the water out through it. In fact, the head of water standing in the well which it would be necessary to raise would be greater in say a 1-inch tubing than in a 3-inch.

Mode of Operation

The object is, then, to take gas from the well through the tubing and, due to the friction of the gas in passing from the bottom of the hole to the top, maintain a back-pressure on the sand and thus keep back the water. At the same time, the increase in velocity due to the decrease in size of opening picks up some of the water and carries it out of the well. This water is taken care of by drips before the gas reaches the meter settings. In some cases where there is considerable water the use of automatic drips handles the water very efficiently. Our manner of handling the tubing is to simply run the string down through the stuffing box until we reach the top of the water and then allow the water to flow out through the tubing. As the water is lowered in the casing the tube is lowered slowly. It is sometimes a very tedious process as you can see that it would not take much water in a 6-inch casing to fill quite a string of 1-inch tubing. In some cases where high pressure gas is convenient we use it around the tubing to help in lifting the water. When in place, or about 1 inch off bottom for every 100 feet of hole, the tubing is hung from the top and allowed to swing free at the bottom.

In fields where the wells are large and the rock pressure high and deliveries low, the matter of handling the gas without having gates freeze off took considerable experimenting. But I believe our difficulties are solved with line heaters and so-called regulating by-passes. The line from the well to the meter setting is usually 2 inches or 4 inches. If either a 2-inch or 4-inch gate valve is cracked to handle the right amount of gas desired, you know the result due to the expansion of the gas so rapidly—freezing off of the gate, breaking open and freezing again and with it the accompanying painted chart on the meter. So our way of regulating the flow of gas is to open wide the master and side gates on the well and close the line gate above mentioned. Around this gate we build up two or three by-passes of from 1-inch down to about ½-inch pipe with high pressure brass stops in the lines. The object is, of course, that one of these by-pass lines will handle the amount of gas normally passing with the stop probably nearly wide open. On some wells of extremely high pressure we have used 2-inch by-passes cutting from 1,400 lbs. to 800 lbs. on the first and from 800 lbs. to line pressure on the second. With these by-passes and the addition of heaters we have not had any trouble with freezing control gates.

Measuring Gas

The amount of gas taken from each well is measured by a separate meter at the well before it enters the main line. I will not go into the measurement end of it at all inasmuch as that is a subject in itself. However, I might say that we are pretty well standardized on the orifice meter for the field measurements.

Before passing on, I might say that all of our gas sold in the field for lease and drilling purposes is measured gas sold through a meter. For this purpose we have been very successful in the use of a high pressure 60 Lt meter similar to the domestic meters. This meter is equipped with a volume and pressure recording gauge which not only records the pressure of the gas in the line but also gives us a check on the meter reader by recording a loop on the chart for every 1,000 cubic feet registered on the dial. With measured gas and low pressure burners we find that the fuel bill is considerably less for the operator than with the old flat rate of $25 a day.

At present the Oklahoma Natural Gas Co. has close to 1,150 miles of main line pipes, which means anything 4-inch or above in diameter. As you all know, in the old days a gas company would, in laying a main line, estimate the size of line necessary to carry the gas and let it go at that, without even a prayer that the line would carry the consumers over the peak load on the coldest days. But progress has been made in this line, as in all others in the gas companies and now, before any pipe is ordered, a careful check is made of the capacity of the line to take care of the normal, as well as the peak loads.

Figuring Capacity

It is an easy matter to sit down and figure out the capacity of lines which are already laid, as both Oliphant and Weymouth have given us formulas for line capacities which check very closely. For example, I worked out the following problem by both formulas. Find the capacity of a 4-inch line 50 miles long with an intake pressure of 300 pounds and a discharge pressure of 200 pounds.

Oliphant's Formula

$$Q = 42\ a\ \sqrt{\frac{P_1^2 - P_2^2}{L}}$$

Where Q=cubic feet per hour
A=Constant determined for various diameter of pipe
P_1=Absolute intake pressure
P_2=Absolute discharge pressure
L=Length of line in miles

Weymouth's Formula

$$Q = 18.062\ \frac{To}{Po}\left[\frac{(P_1^2 - P_2^2)\ d^{5\frac{1}{3}}}{G\,T\,L}\right]^{\frac{1}{2}}$$

Where Q=cubic feet per hour
To & Po=absolute temperature and pressure
P_1=Absolute intake pressure
P_2=Absolute discharge pressure
d=Diameter of pipe, inches
G=Specific gravity of gas
T=Absolute flowing temperature of gas
L=Length of line in miles

Substituting the figures in these formulas from the problem above I got a capacity of 1,118,000 cubic feet from using Oliphant's formula and 1,161,000 cubic feet from the use of Weymouth's formula. But at the best it is never possible to check the computed capacity of a gas line against a meter measurement as these formulas are merely intended to make determinations as to the proper size of lines to carry an estimated amount of

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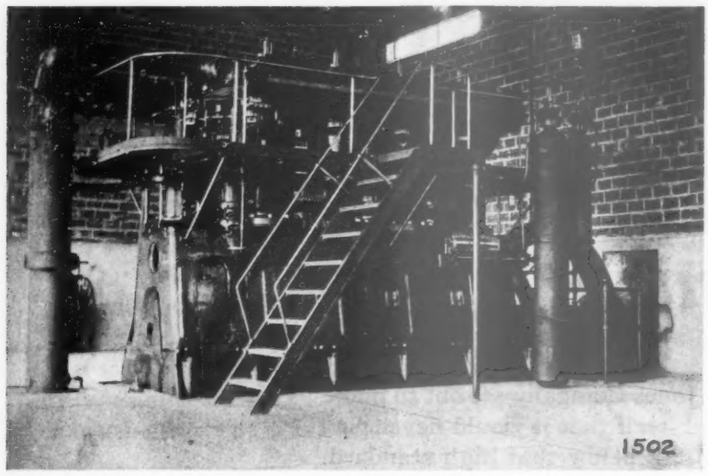
IN SIZES FROM 20 TO 8000 B.H.P.

FOR ALL PURPOSES



400 H.P. Engine in a Pipe Line Station

McIntosh & Seymour heavy duty four cycle Diesel Engines make successful pumping units in pipe line stations. As proof of this over 100 McIntosh & Seymour Diesel Engines totaling over 40,000 Brake Horse Power are installed at the present time in pipe line stations.

Because McIntosh & Seymour Engines are of rugged construction; built for heavy duty and continuous service, they are well adapted to the exacting work of pipe line service.

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gas. Any deviation of the actual effective diameter from that assumed in using the formula results in a multiplied error, due to the fact that the flow is proportional to the diameter raised to a power in both formulas.

Line Capacities

For our own convenience we have worked out a table of line capacities for practically the entire system, dividing it up into sections which are of interest to us. For example, if gas is being taken from the gas field south of the town of Depew, to be sent to Tulsa via our Kelleyville compressing station, we know the amount the line will handle from the field to the station at field pressures ranging from 300 pounds down to 150 pounds, and then from the station to Tulsa at various pressures. The same applies to say Norge Field to Oklahoma City. Hence when a call comes for more gas to our pressure dispatcher he knows the route he can send the gas and also can set the field or compressing station pressures to supply the needed raise.

In order to determine the size of line necessary to be laid, it is necessary to consider the character of service to be rendered and the various factors to be expected. The load curve for a typical cold day must then be considered and the pipe lines designated not only to deliver the total quantity for the day at the average hourly rate, but also to provide sufficient storage or additional capacity to carry the load over the peaks. As a rules, the demand for gas during the peaks will amount to about 20 per cent of the total daily delivery. In general, it is desirable to design the system for the maximum pressure by the commissioner, or 300 pounds, for the reason that high pressures demand smaller pipes and usually the size of the line is the most important consideration in the cost of a system. On the other hand, and offsetting the lower cost of the smaller lines due to high pressures, we find that wells must be of high pressure (which pressure may not last long), and more power is necessary in the compressing stations, with corresponding increased cost of pumping the gas. Line leakage is also much more serious with higher pressure and on account of this it is necessary to keep an absolutely tight line at all times.

Example of Peak Load

A good example of a peak load may be gleaned by one day's deliveries in the city of Tulsa. On one of the cold days a few weeks ago Tulsa used about 31,000,000 cubic feet of gas. Between 7 and 8 o'clock in the morning the rate at which the city was being served was 45,000,000, or an overload or peak of 50 per cent above a daily peak load. And yet we did not have any shortage reports for that day. Of course the city plant system is a big factor here. But from the above figures you can readily see what line capacity we must have ready as a standby factor, for I believe that in nine months out of the year our deliveries would only be from 25 per cent to 40 per cent of the daily deliveries on the cold days.

Leakage and Shrinkage

Besides having the great mileage of line divided up into districts so as to know the capacity of any desired segment, it is also divided into many divisions by the gas measurement department and an accurate record kept of the leakage or shrinkage for that particular section of line. As I said before, each well is individually measured at the well. Sometimes eight or ten wells are then tied into a feeder or gathering line and it in turn empties into a main line. At the latter point we also set a meter so as to segregate the wells and the gathering line. Any point where a main line enters another main line or at the junction of two or three lines, meters are set. In this way a very accurate record is kept of the amount of gas entering and leaving each little system. At the end of the month, then, each superintendent receives a statement of the shrinkage in his district and it is up to him to answer for any shrinkages much above 10 per cent. You can readily see that the spirit of rivalry enters into this statement, for if a man is worth his salt one of his first efforts is to keep his shrinkage down as low as possible. No field superintendent receives the shrinkages of any district other than his own but it is an individual matter for him to get busy when he sees his shrinkage creeping up. It is impossible, with a large system, to entirely eliminate all losses due to gas leaking around coupling rubbers and valve and regulator stems, but I defy anyone to find a system that is much tighter than that of the Oklahoma Natural Gas Co. Perhaps one reason for that is that Mr. Leonard can detect a leak around the stem of a quarter-inch valve and will request the tightening of the stuffing box on that small valve just as soon as he would on a 16-inch valve.

Laying Lines

Most of our lines above 4-inch are "rubber-neck," or Dresser coupling lines, as, up to date, we have found that kind of line renders as good service as any. As you know, it would be out of the question to try to lay a gas tight line in any of the larger diameters with screw pipe and that collar clamps for these joints would be prohibitive in price. Of course, the rubber coupling lines require a gang every few years to tighten up the nuts on the bolts or else to renew the rubbers, but at that the job is not a hard one nor is it very expensive. The only other line, or the welded line, has met with a reasonable amount of success and likewise with considerable trouble. Our company laid a welded line about 6 or 7 miles long out of Dilworth towards Enid and to date has not had any trouble. In a welded line for gas the two chief difficulties to overcome are the expansion and contraction of the line due to temperature changes and also the repair of leaks after gas has been in the line. The method we used on the Dilworth line was, in addition to the uses of long couplings or sleeves, to lengthen the line by raising and lowering it alternately in the ditch by placing wooden supports under the line at distances which would not put any strain on the welded joints. After the line was all finished these supports were knocked or burned out, thus giving the line considerable chance for contraction. (This line was laid in the summer.) Another way of handling the same method is in using a ditch slightly wider and blocking the line first on one side and then on the other. For an added factor of safety it is best to use the sleeves in addition to the zig-zagging the line for a break in a welded line is a sad thing especially when it is the only line carrying high pressure gas to a city.

Removing Gasoline

With the rubber coupling line, of course, comes the trouble with gasoline in the gas unless means are provided for its removal. So the modern gas company strips all gas of its gasoline content before it has gone very far. Several years ago there were legal battles involved over the question of the loss of heating value due the removal of the gasoline vapor from the gas. But without gasoline plants, difficulty is experienced from condensation of gasoline and water in the lines and the subsequent freezing in cold weather as well as the disintegration of the rubbers in the coupling. Therefore, the removal of the gasoline vapor helps the service and the amount of heating value removed scarcely goes over 2 per cent. A formula worked out by the Bureau of Mines showing the percentage loss in heating value due to the removal of the vapor is as follows:

$$B - \left[\frac{B-(A\times 119{,}400)}{1-(A\times 30)}\right] \text{ where}$$

B

A—gasoline extracted per cubic foot of gas

B—B.t.u. value of gas before treatment

119-400—B.t.u. per gallon of gasoline, and

30—number cubic feet of vapor to the gallon of gasoline.

For a gas of 1040 B.t.u.'s and a removal of 0.2 gallons of gasoline per 1,000 cubic feet of gas the above formula gives a percentage loss in heating value of 1.73,

(Continued on Page 94)

"ROUGH RIDER" RUBBER BELTING

If CONTINENTAL sells it

While the initial cost of ROUGH RIDER BELT is higher than others, the ultimate cost is lower.

The duck used in its construction is made especially to meet the extreme conditions encountered in all oil fields. The high quality of cotton used in the yarn, and the manner in which it is woven, gives it great tensile strength, yet without sacrifice of flexibility.

The friction between the plies is made from a compound which not only has strong adhesive qualities but long ageing properties as well. In addition the inner plies are lock-stitched together by strong twine, thus preventing ply separation. A reinforced cover of high grade stock protects the duck from moisture and wear from rough pulleys. The best belt made for Drilling, Pumping, or as a Power belt.

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PRESCOTT MENOMINEE

PIPE LINE PUMPS

PRESCOTT MENOMINEE

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4000 to 6000 BBLS.
DAILY CAPACITY
CARRIED IN STOCK
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PETROLEUM POSSIBILITIES IN BRAZIL AS SUMMARIZED IN LATEST SURVEY

By M. A. Cremer*

Brazil has within its boundaries approximately 43 per cent of the total area of South America and is the largest country in that continent. Its coast line, near which most of the population is centered, extend 3,641 miles from north to south. It is necessary to emphasize distance to secure a proper conception of the extent of the country and the time required for traveling.

The geological map prepared by John Casper Branner shows the eastern and northernmost sections of Brazil to be very old from a geol•gic point of view. Dr. A. W. Taves of the Cia. Braseira de Petroleo, says: "In most of the Brazilian basins the sediment appear to have been deposited very thickly and these Permian-Carboniferous basins extend from the northeast to the southwest, from the States of Maranhao and Piauhy to Rio Grande do Sul. If a straight line be drawn from the city of Maranhao to the city of Porto Alegre, this line will pass through the middle of a broad belt of Triassic, Upper Permian, Lower Permian, and to a lesser extent of Carboniferous and Devonian geological strata."

Branner states petroliferous deposits are known to exist in Alagoas, Bahia, Ceara, Goyaz, Mahanhao, Minas, Geraes, Parana, Santa Catharina, Sao Paulo, Rio de Janeiro, and Rio Grande do Sul. The distribution of these deposits is from the Permian to the Pliocene. Branner further states that oil bearing shales form a nearly continuous band of fresh water sediments that extend from a short distance south of Caravellas, in southern Bahia, to the basin of the Amazon River. The width of the band varies up to 50 miles. The formation containing the oil shales is from 100 to 300 feet in thickness. In this belt oil shales of promise have been found in several places in Bahia and Alagoas, and may be expected in the other coast States to the north where Tertiary strata are found.

A thick formation of black shale, termed "Iraty black shale," by Dr. I. C. White, who studied the region, extends fram Sao Paulo southward across Parana, Santa Catharina, and Rio Grande do Sul. Doctor White is of the opinion that petroleum was once contained in many of the strata of southern Brazil. However, he adds, the great flows to the surface of diabase and basalt, which accompanied the extensive fissuring experienced in this region, allowed the oil to escape and such as may remain does not exist in quantities large enough to make their extraction profitable. This opinion is borne out by surveys just completed by several American geologists, who, after an extensive investigation of those areas of southern Brazil where oil indications appear, came to the conclusion that while oil is present —good structure particularly having been located in two placed, one in Santa Catharina and another in Sao Paulo—the deposits present are not large enough to make worth while the outlay of expenditure and effort necessary to exploit them. This point of view has until recently discouraged drilling in the Campos district of Rio de Janeiro.

Poor Results From Drilling

Another feature inducing pessimism has been the poor results obtained from drilling. However, although a number of wells have been drilled, particularly in Sao Paulo, none (with the exception of one now being drilled in the Campos district of the State of Rio de Janeiro) has reached a depth greater than 1,600 feet, while few have passed 1,300 feet. Again, with the exception of the well mentioned and another recently drilled in Sao Paulo, no experienced drillers have been employed, and very little scientific judgment was used in deciding on the locality where drilling operations should commence. The apparatus used consisted of composite rigs, core rigs, and percussion rigs of small capacity.

With the appearance of petroleum in some of the wells of the Sao Paulo, which did not descend very far from the surface, hope has been revived and a feeling of optimism is evident. The attitude of the Government in purchasing a drilling outfit and the appearance of newspaper articles favorable to the possibility of important oil discoveries are weighty contributing factors. In view of the conclusion reached following a recent survey by American geologists, the results that may be obtained will probably not be important. It is the opinion of many that if oil is discovered in Brazil in large quantities, it will be found in the Amazon Basin, where the sedimentary deposits, which are of great extent, have been left undisturbed by folding or eruptive action of the earth's surface. Unfortunately, very little is known regarding the geologic structure of this section of Brazil. The Brazilian Government had a survey made several years ago, which showed the formation at the head waters of some of the rivers and went to prove that the Amazon region had at one time been an inland sea. The only other data available are contained in books and articles written by explorers who had no interest in the possibilities of locating oil-bearing formations.

Indications in Alagaos State

Miller and Singewald, in their book, "Mineral Deposits of South America," write as follows:

The shales near the mouth of the Camaragibe River and at Riacho Doce, in the State of Alagoas, have been investigated by an English company. Ten analyses showed a range from 7.5 to 46.3 per cent volatile matter. The sample showing the highest percentage was further investigated and upon distillation yielded 44.73 gallons of crude oil and 19.58 gallons of ammoniacal water to the ton. It contained 4.7 per cent sulphur.

In State of Bahia

Horace C. Williams, an American, on the staff of the Brazilian Government Geological Survey, states that rich bituminous shales with asphalt seeps occur near sea level to the south of Ilheos. Quoting Miller and Singewald again:

"Turfa (erroneously called 'turba' by Hartt) beds are known to occur on the northern part of the island of Tinhare, which is about 25 miles south of Bahia, along the Itahipe River in latitude 14° 44′ S., and on the Marahu River, just south of the Bay of Camamu, about 70 miles south of Camamu. Hartt (84) describes the last-mentioned occurrence as follows:

" 'The specimens of turba which I have seen were of very light material, grayish or brownish in color, and felty in texture. The material burned readily when ignited in a candle, affording an abundant smoky flame. * * * The material appears to be merely a mud impregnated with bitumen; and as it appears to exist in large quantities, it would be very valuable for gas making or the manufacture of kerosene.'

"A shaft in this turfa district 108 feet in depth passed through five beds of bituminous shales or clays aggregating over 20 feet in thickness. Several years ago a company obtained control of these deposits and erected an extensive plant with the intention of extracting the oils, but through mismanagement the project failed without demonstrating the feasibility of utilizing materials."

The Brazilian "turfa" yielded an oil of low specific gravity, containing a fairly large amount of light distillate of relatively high saturation. The yield of scrubber naphtha was high, probably on account of the large volume of gas given off by this shale. The viscosities of the vacuum distillation fractions of this oil were low, as was the carbon residue of the vacuum residuum. The shale shrank to about one-third of its original volume during retorting, forming a weak friable coke. The "turfa" is distinct from all known bitumens, and can hardly be

*Assistant Trade Commissioner, United States Department of Commerce.

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classified as a true shale, it having more the nature of peat. It floats on water but does not absorb much on being immersed for many days. It is easy to cut, elastic to shock, but when subjected to pressure it breaks and pulverizes very easily, giving a fine light dust. Turfa is rich in oil, but deposits of it are limited in extent.

Campos District

Horace Williams presents a plausible hypothesis regarding the possibility of finding oil in the Campos district. Other American geologists, however, do not consider the Campos district worth a survey. A well drilled some time ago by crude hand methods showed a heavy seepage of oil at a depth of 30 meters. Shortly afterwards the well casing was broken, and work was not resumed because of lack of capital. At present, Henrique Lage, of Lage Irmaos, a wealthy Brazilian concern chiefly engaged in shipping, is drilling in the same district—at Santo Amaro, near Cabo de S. Thome, using a rig with a capacity of 4,000 feet. It is reported that a depth of 2,300 feet has been reached, only soft sand formation having been encountered.

Sao Paulo Operations

Impregnations of asphalt and exudations of bitumen are found in several localities of Sao Paulo. Asphalt-impregnated sandstone is particularly abundant in the region extending from Guareby to Bofete, Alambary, Porto Martins, Santa Maria, and Sao Pedro southward to the State of Parana.

About the first well to be drilled was one sunk with aid of an American sounding rig, on the Bofete Hill, approximately 18 miles from the Piramboia station. At a depth of 1,340 feet 2 bbls. of petroleum are said to have been extracted. Soon thereafter work was abandoned for lack of capital to purchase additional needed equipment. The American geologist, Dr. David White, in commenting on this well, wrote:

"When it was brought to my knowledge that genuine petroleum had been found by soundings in the vicinity of Rio Bonito in Sao Paulo, I was not surprised, the more so as the boring was done near a cleft in the rocks which would permit of large quantities of petroleum to escape to the surface and saturate the same with its residue (asphalt, etc.) No petroleum could reasonably be expected in commercial quantities from this sounding. The well should have been drilled far from the cleft where the effusion of the eruptive rock did not exhaust the deposits of the underlying rock."

Dr. Domicio Pacheco e Silva, the head of the Associacao Permanente das Estradas de Rodagem, of Sao Paulo, who is financially interested in the Sao Pedro district, in commenting on a visit to Bofete, said:

"Bofete has its origin from the Triassic, bordering on the Permian period. Situated near a large natural deposit of bituminous sandstone, there has flowed for 20 years, from the old sounding, a swift, tepid, current of water, rich in carbonates and chloride of soda. The emission of inflammable gases gives the impression that the water is boiling. Every moment bubbles appear, bursting at the surface, leaving rainbow colors on the water. One notices the strong smell of kerosene. The noted Belgian scientist, Auguste Collon, after carefully studying this place in his report, also came to the conclusion that petroleum would in all probability be encountered."

Besides the above undertaking there should be mentioned the sounding made by the Empreza Paulista de Petroleo, in Rio Claro, which, however, was interrupted at 980 feet after an expenditure of 280 contos. Soundings have also been made in the neighborhood of Sao Pedro de Piracicaba, where three promising wells at "Kerosene," the "Graminha" farm, and the "Formazieri" farm, respectively, have been located, while others less successful were drilled at Santa Maria and Ityrapina. For many years surface indication of petroleum have been noted in the Sao Pedro district, such as emanations of natural gas, slight oil seepages, asphaltic conditions, etc. Water wells dug in the neighborhood have gone through a black, gummy sand at shallow depth, 20 to 30 feet, and, at times, an iridescent film has appeared upon the surface of the water. Upon heating this sand, a heavy smoke has appeared with the odor of petroleum.

Sao Pedro District

Dr. H. MacMillan, an American engineer, in reporting on this district, wrote as follows:

"While on the train, long before arriving at Sao Pedro, I noted in the railway cuts, where the rocks were exposed, that they were of comparatively level blanket formation. This condition is almost always necessary in locating oil-bearing formations, as in broken formations, where upheavals have taken place, if any oil had been stored or confined in the rocks, the breaking up in the upheaval would, naturally, allow the oil and gas to escape, as both are of a volatile nature.

"The country in this neighborhood is a low, rolling country. The roads are all sandy, and the vegetation is rank and scanty. It is poor farming land. The altitude of Sao Pedro is about 2,000 feet (600 meters) above sea level.

"My inspection in the vicinity of the Sao Pedro district covered two wells, one nearer the railroad on the Graminha farm and the other well at a place called Kerosene.

"Mainly sand soil was encountered on the road to Graminha, while on the road to Kerosene, in the opposite direction, the soil consisted of sands and clays. Graminha is to the south of Sao Pedro and at a samewhat lower altitude, whereas Kerosene is to the north and quite near a ridge known as the Serra de Itaquery, which rises in places some 800 or 900 feet above the surrounding country."

The well at Graminha farm was first dug by Francisco Santos, jr., to a depth of 30 feet. The Geological Department saw this well and decided to sink a 6-inch hole nearby. So the present core drill well, from which natural gas and oil droplets now escape, was sunk some 200 yards away. From the best information obtainable it appears reasonably certain that, after the surface water was passed, an artesian well of small flow was struck at 780 feet, and natural gas at 850 feet. At 500 feet the drill went through some limestone containing little pockets of oil. No hard formation was encountered. A small core drill was used, and only a 15-horse power engine. The drilling was stopped at 1,080 feet, in the early part of 1922, because of the lack of power of engine and boiler used.

The MacMillan report continues:

"The Graminha farm presents absolute proofs of the existence of both petroleum and gas. From this well flows a small amount of water, slightly saline, and with some odor of sulphur. Oil is rising almost continually and spreading over the surface of the water, giving off the colors of the rainbow, a characteristic which belongs almost exclusively to petroleum oil and its products. The gas from this well, when ignited, burns nicely and gives off a black smoke, showing the presence of hydrocarbon, which is ample proof of its close relation to oil. In fact, the oil rising to the surface of the water in this well, in company with the gas, is enough to convince anyone having only a very limited knowledge of the indications of petroleum. (According to official reports 10 cubic meters of this gas yields by compression 3 liters of high grade gasoline.)

As above noted, the outcrop of rocks is almost level blanket formation. Shales and slates and so-called soapstone are abundant everywhere. Then, there is a heavy, gray sandstone formation, running off through this region, of a very uniform character, color, and thickness and containing hydrocarbon in the form of asphalt, which ignites and burns, giving off a black smoke when heated over a fire. The writer experimented with a small piece of about one pound in weight, which continued to burn and give off a nice flame for a long time after it had been heated over a wood fire.

Eastern Comparison

"The outcrop of red shale or slate, as shown in the railway cuts and hillsides, are almost identical with those to be seen

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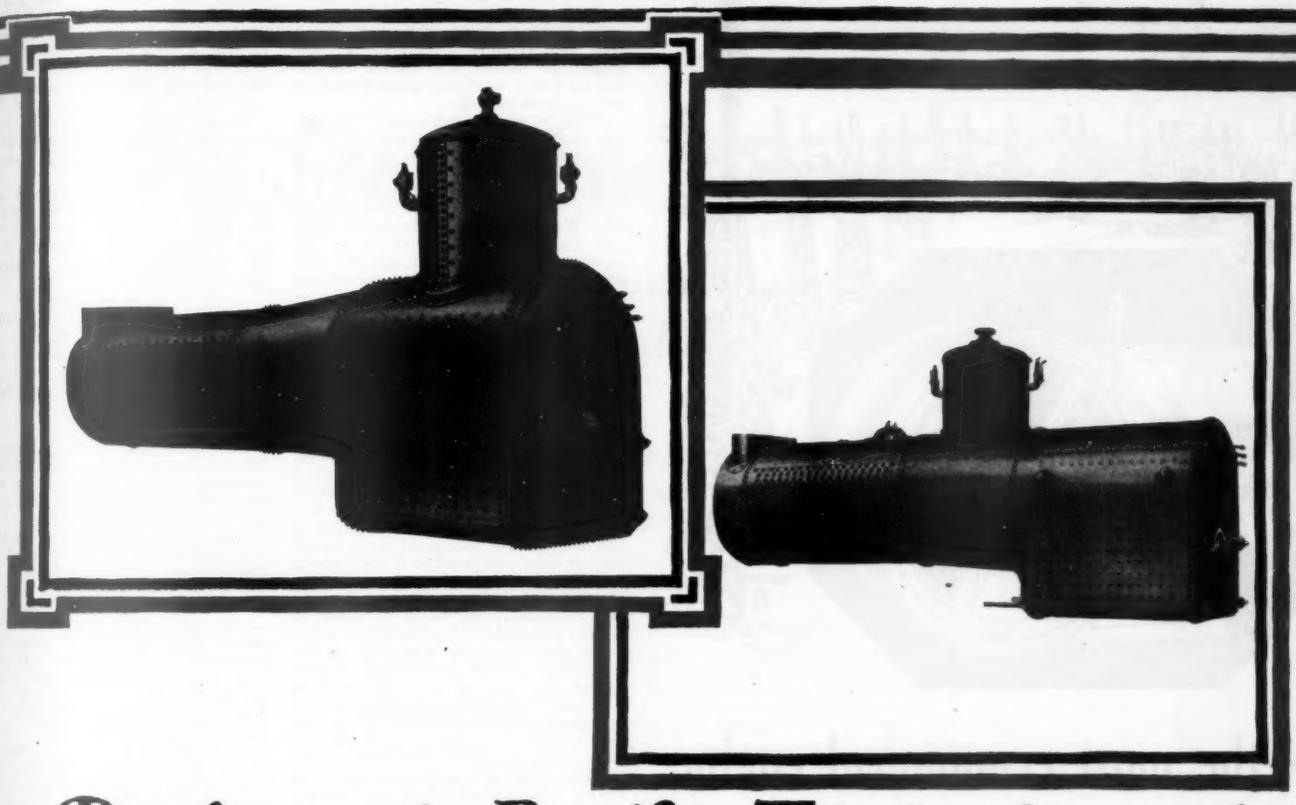

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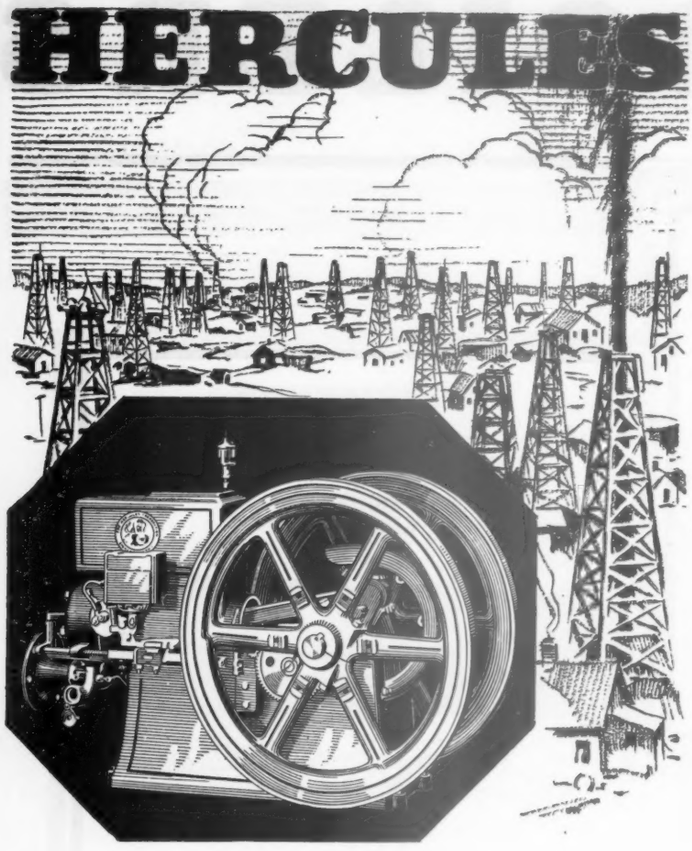

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at many different points in Pennsylvania, West Virginia, and Ohio. Another important feature is this: As water gives approximately a pressure of 43 pounds per square inch for every 100 feet of depth, and assuming that your information is correct that the gas in this well was struck at 280 meters (approximately 900 feet), then, if these figures are correct, the gas in this well must be under a pressure of about 400 pounds per square inch. Now, a column of water 900 feet high and exerting a pressure of 400 pounds per square inch against the gas and oil below, is almost great enough to shut them off entirely.

"Now, let me cite two cases where similar conditions were met with. In the United States, one well was on the Dumbach farm in the 100-feet field in Butler County, Pennsylvania, and the other was known as the Polecat well near Sisterville, W. Va. In the Butler County well, salt water was encountered in the oil producing sand along with the oil. Not any more oil was shown on the surface of the water than appears in the Graminha well. The owner installed a 3-inch pumping outfit, and, after pumping continuously day and night for over 90 days, the well at first started producing a small quantity of oil which increased from day to day, and finally started flowing at the rate of several hundred barrels of oil daily. The other well in Polecat hollow (hence the name of polecat well) in West Virginia, filled up to the top and flowed salt water with a small showing of oil on the water. The same methods were employed in this case, with the result that this well started flowing oil as the pressure of water was weakened, and, after a time, flowed at the rate of over 4,000 bbls. of oil daily. These are facts that many men living today can testify to. Now, it is only reasonable to assume that if the water pressure were weakened in the Graminha well, a very much greater quantity of both oil and gas would be produced. It is only a logical deduction that pressure of water on an oil and gas producing formation would be no different in Brazil than in Pennsylvania and West Virginia, and that similar conditions in Brazil would bring about similar results."

The well is now in the possession of the Companhia Petrolifera Brasileira, which has an option on the land on which it is located. A machine, capable of drilling to a depth of 1.000 feet, was recently brought into the Sao Pedro district by the company. Just where it will be located is not ascertainable.

Well at Kerosene

While the well at Graminha is about 3½ miles in a southeasterly direction from San Pedro, the well at Kerosene is about 12 miles in a northeasterly direction, and the well at Santa Maria about 2 miles in a westerly direction. The well at Kerosene is about one-half mile from the crest of the Serra de Itaquery, which is said to be a dike of sandstone and diabase about 100 miles in length and rising in places, at times precipitously, and at places to a height of 1,000 feet above the adjacent land. There is said to be no granite in this Serra. This well is supposed to have reached a depth of from 1,300 to 1.600 feet after more than a year's drilling. The engineer in charge has admitted that only comparatively soft strata—that is, sandstones and limestones—had been encountered, and that the cores in the vicinity (about 350 feet of cores) bore out his statement. It has not been possible to obtain any information as to whether or not any oil had been struck; but a native landowner living near by states that no free oil were obtained. Some water about 50 yards away contained a slight oil rainbow film, which may have come from the washings, but more probably from the natural seepage. Drilling was stopped during the last half of 1922 because the engine did not have sufficient power to bring up the drill pipe and tools. It was a 12-horse power engine, and, altogether, the operations were inefficient. It is not expected that further drilling will be done in the very near future, and the drill has been removed. MacMillan concludes:

"As natural gas, oil, and asphalt are all three in evidence in the Sao Pedro region, and in addition, we have an unbroken sedimentary formation, I am led to the reasonable conclusion that this region around San Pedro offers a most excellent chance to develop petroleum and gas in commercial quantities."

Other wells drilled in the same district are those at Santa Maria, already mentioned, and Ityrapina. The former is about 2 miles west of Sao Pedro and did not go deeper than 650 feet. At present nothing is being done there. The Ityrapina well also was brought to a depth of 650 feet, the drill being removed subsequently.

It is reported that the strata in these two wells is generally uniform in character, no further information having been given by the Government.

The last well drilled is that on the Formazieri farm located 4½ miles from Sao Pedro, which was put down by Angelo Balloni, of the Companhia Petrolifera Brasileira. Crude oil appeared at a depth of 50 feet.

Santa Catharina

Henrique Lage is sinking a well with a water well rig near Rio dos Peixes, while the Companhia Nacional de Industrias Mineiras plans to drill at Rio Bonito, located near the Sao Paulo-Rio Grande Railway.

Parana

The Government geologist, Eusebio de Oliveira, in one of his reports, states that samples of sandstone gathered in this State have, just after being broken, a pronounced smell of petroleum, and many of these display cavities of small size from which heavy and dark oil seeps. These indications on the Serra da Baliza are undoubtedly the most important in southern Brazil. Near the Jangada River arenites which have undergone metamorphosis from contact with eruptive rock are found. Both the arenite and eruptive rock, when broken, reveal several cavities containing oil. Unconfirmed reports state that oil has recently been found here and also at Rio Claro. Henrique Lage is said to be using a combination rig at Sao Matheus, while the Government is also drilling at Marechal Mallet, on the So Paulo-Rio Grande Railway.

Rio Grande Do Sul

The Government is reported to be sinking a well at Ferreira, in the central part of the State.

Goyaz

Newspaper reports have it that Professor Millward, of the medical-surgical faculty of Sao Paulo, and an authority upon mineralogy and geology, located a large basin of petroleum in the municipality of Rio Verde, along the banks of the Rio Verde River. Additional reports published in local newspapers are to the effect that two geologists in the employ of the Federal Government claim to have discovered important oil deposits in the municipalities of Caldas Novas and Marimbos.

Prospecting for petroleum, the registration of discoveries, etc., are covered by the present mining law of Brazil, which is known as Decree No. 15,211 of December 28, 1921. It was published as Official Gazette, dated January 13, 1922. Four of the States of Brazil, namely, Minas Geraes, Santa Catharina, Sao Paulo, and Goyaz, have also enacted mining laws which complement that of the Federal Government.

Loan copies of the Federal law and those of the States of Minas Garaes and Santa Catharina are on file in the Minerals Division of the Department of Commerce at Washington.

Companies Interested

Following is a list of companies and individuals now interested in petroleum in Brazil, which are known to the office of the American Commercial attache at Rio de Janeiro:

Companhia Brasileira de Petroleo, controlled by Oscar Taves & Co., important import commission house of Rio de Janeiro. It has options on 2,000,000 acres in Goyaz, and also on 140.000 acres in the Sao Pedro district, 6.000 acres in Santa Catharina and 100,000 in Parana, where there are indications of petroleum, such as oil seeps, emanations of natural gas, oil impregnated sands and albertite. The

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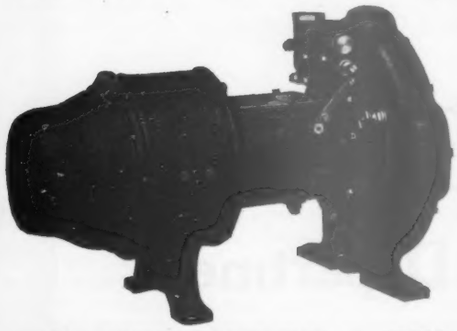

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company has employed geologists on various occasions to make surveys of their properties. It is also working with American capitalists. Various investigations have reported the company's holding in Santa Catharina, Parana and Sao Paulo unsatisfactory. Anticlines were located in Santa Catharina and Sao Paulo, but the reservoirs are not considered to be sufficiently large to warrant drilling. An expedition working recently in Bahia found no indications of value.

Companhia Petrolifera Brasileira, with which Angelo Balloni, who discovered the Formizieri well, is connected. Mr. Balloni, it is said, was at one time working in the Texas oil fields, and also as an engineer for the Anglo-Mexican Petroleum Co. In addition to the aforementioned well, the property on which the Graminha well is located is also held by this company. Options total 30,000 acres.

An American oil company had four scouts in the field. In their surveys of southern Brazil these scouts did not find promising surface indications.

Jorge Greisbach, merchant and capitalist of Sao Paulo, and E. E. Clayton, Calmon and Bridge, have options on 180,000 acres in Sao Paulo. Some of the land is on the banks of the River Tiete where asphalt and petroleum have been discovered. The asphalt deposits are said to be rich. Some asphalt is now being removed and the equipment necessary for its preparation is being installed. Drilling for oil is reported to be going on.

Henrique Lage, of Lage Irmaos, Brazilian shipping, exporting, and importing firm, has option in the Campos district of Rio de Janeiro, where he is drilling. He is also drilling near Rio de Peixe, Santa Catharina.

Federal Government, owning wells at Kerosene, Santa Maria, and Ityrapina, in the Sao Pedro district, is reported to be drilling at Marechal Mallet, in the State of Parana, and Ferreira, in Rio Grande do Sul.

Pan-American Development Syndicate, coming in April with a staff to carry on survey work.

Cia. Nacional de Industrias Mineiras has been authorized by the Government to drill on the land reserved for a railway station at Rio Bonito, Santa Catharina, on the Sao Paulo-Rio Grande Railway.

Prof. T. D. Day, who is being backed by Hime & Co. and others of Rio de Janeiro, obtained a concession in October of last year from the State of Matto Grosso permitting surveys for petroleum on the State lands. The concession is reported to require the initiation of a survey within 12 months, which must be carried on periodically until 1928. The concessionaire must also erect a plant for refining sufficient oil to supply the State. The State receives 10 per cent of the gross product or of the value of the product at the mouth of the well. A 10 per cent export tax will also be assessed by the State, as well as an additional tax of 2 milreis per ton.

Snr. Jose Giorgi, owner of the Empreza de Electricidade Sul Paulista, is at the head of a company recently formed to drill on land acquired in Guarehy, State of Sao Paulo.

Consumption of Petroleum

No petroleum is being produced and no refining of manufacturing of petroleum products is being carried on in Brazil.

In 1921 the peak in imports was reached, this being due principally to the entry into the field of two additional oil companies, who placed stocks in a number of the leading ports. In 1922 the drop in imports of fuel oil, due to the greater ease of obtaining coal, caused a big reduction in the total shipments received. The year 1923 witnessed an improvement, due to increase of stocks in the hands of agents; consigning of stocks to subagents and increased importation in view of expected increases in import duties. These increased duties were enacted on the last day of the year.

The greater part of the petroleum imports are shipped to Rio de Janeiro and Santos, which two ports serve the largest consuming centers. Then follow the ports of secondary importance, including Para, Recife, Bahia, and Rio Grande, and in turn those that may be placed in the third classification, namely, Sao Luis, Fortaleza, Natal, Cabedello, Macelo, Victoria, and Parangua. In addition, there are a number of smaller ports with correspondingly smaller hinter lands.

Marketing Methods

The first company in the field was the Standard Oil Co., which entered the market prior to the Civil War and established its own company in 1912. The Texas Co. incorporated in Brazil in 1915, while the Anglo-Mexican and the Atlantic Refining established their own offices in 1921, all having previously carried on their business through agents. The Caloric Co., which handles fuel oil only, opened its office in 1912. These five companies do most of the business. They have invested large sums of money in installations, warehouses, stocks, offices, etc., have covered the market thoroughly, and compete strongly for business.

All of these companies maintain local offices, having created subsidiaries under the Brazilian law to obtain the benefits accruing to Brazilian companies. Other companies operate through exclusive agents—that is, they select a house which acts as their general representative for all Brazil.

The consumption of gasoline in Brazil has increased over 50 per cent during the last 10 years, and imports in 1923 exceeded 2,200,000 cases.

The consumption of lubricating oils and greases, estimated at 100,000 bbls. per year—the imports of which, according to official statistics, follow a very unsteady course—is certain to increase with the rapidly progressing industrial development of Brazil, the great demand for transportation facilities, the growing number of electric light and power plants, etc.

The consumption of fuel oil has been greatly augmented during the last five years through the increase in its use for both bunkering and industrial purposes. Unofficial statistics show imports of 133,544 metric tons in 1922 and 153,744 in 1923, mostly from Mexico.

KENTUCKY PRODUCTION DURING DECEMBER, 1924

By T. S. Scott
Secretary Kentucky Oil Men's Ass'n.

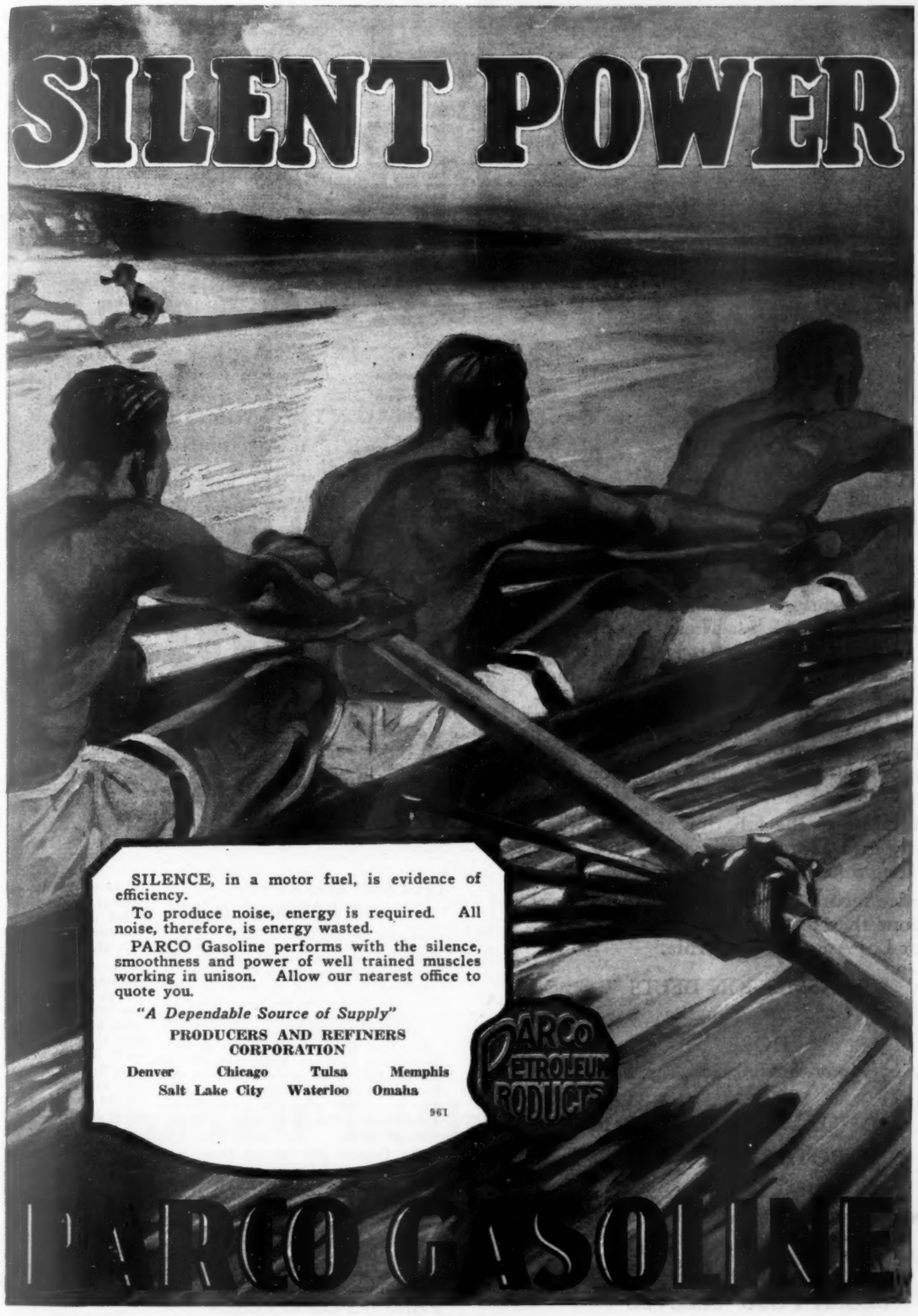
Production of crude petroleum in Kentucky during December, 1924, was as follows:

Allen	23,373.94
Barren	7,153.16
Bath	1,367.91
Clinton	660.79
Cumberland	4,926.74
Elliott	560.16
Estill	31,914.93
Floyd	1,183.64
Hancock	2,584.49
Hopkins	755.84
Johnson	93,903.07
Knott	72.12
Lawrence	50,143.56
Lee	172,995.26
Magoffin	93,983.93
McCreary	382.92
Menifee	480.92
Monroe	1,085.97
Morgan	968.03
Ohio	7,683.56
Owsley	1,346.49
Powell	18,611.93
Simpson	687.98
Warren	39,757.36
Wayne	9,647.70
Wolfe	4,770.15

KANSAS CITY RATES UP 10 CENTS A MONTH

KANSAS CITY, Mo., Feb. 7. — With the new gas rate, authorized by the Kansas Public Utilities Commission becoming effective in Kansas City, Kans., the meter service charge of 50 cents automatically is abolished, W. H. McKenzie, manager of the Wyandotte County Gas Co., announced. The increase will be small. Users of gas will pay 10 cents more a month than they formerly paid, declared Mr. McKenzie.

The gas company was authorized by the utilities commission to charge $1 for the first 500 feet of gas consumed by a customer. Figuring from the regular rate of 80 cents per 1,000 feet, as charged by the gas company, the first 500 feet actually cost 40 cents. Added to the service charge, this would be a total of 90 cents for the first 500 feet, compared to $1 with the new rate.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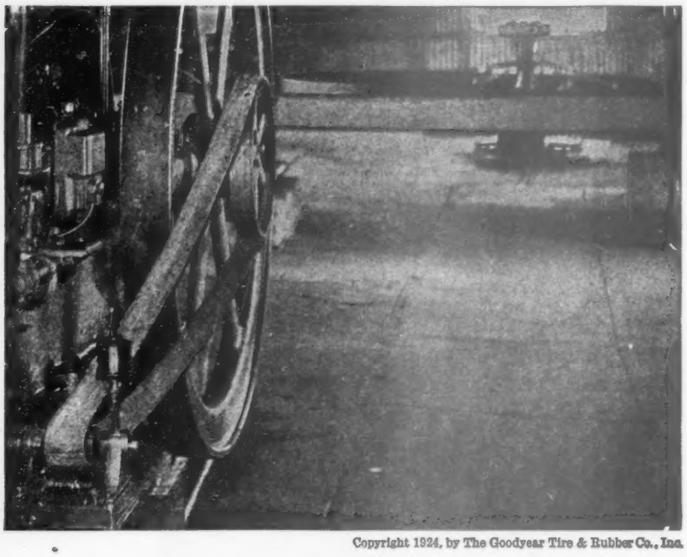

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BUNKER FUEL OIL PRICES MADE EFFECTIVE AS OF JANUARY 27

The following prices for bunker fuel delivered under contracts and from United States Shipping Board Emergency Fleet Corp. bunker stations became effective January 27:

DOMESTIC PORTS
Fuel Oil

Port—	Terminal Price	Barge Price	Effective Dates From	Effective Dates To	Source of Supply
Baltimore	*$1.79 bbl.	$1.855 bbl.	1- 1-25	12-31-25	Standard Oil of N. J.
Boston	Open market from		9-30-24		
Charleston	*1.74 bbl.	.....	1- 1-25	12-31-25	Standard Oil of N. J.
Galveston	*1.50 bbl.	.....	1- 1-25	12-31-25	Mexican Pet. Corp.
Houston	*1.50 bbl.	.....	1- 1-25	12-31-25	Mexican Pet. Corp.
Jacksonville	*1.70 bbl.	$1.765 bbl.	1- 1-25	12-31-25	Mexican Pet. Corp.
Mobile	1.65 bbl.	.....	12-12-24		Shipping Board Station
New Orleans	*1.50 bbl.	1.565 bbl.	1- 1-25	12-31-25	Mexican Pet. Corp.
New York	*1.79 bbl.	1.855 bbl.	1- 1-25	12-31-25	Standard Oil of N. J.
Norfolk	1.79 bbl.	.....	1- 1-25		Shipping Board Station
Philadelphia	Open market from		12-31-24		
Port Arthur	Open market from		12-31-24		
Portland	1.50 bbl.	.....	12- 1-24		Shipping Board Station
San Francisco	*1.30 bbl.	1.35 bbl.	11- 4-24 to	5- 3-25	General Pet. Corp.
San Pedro	1.29 bbl.	1.29 bbl.	11- 7-24 to	11- 6-25	Pan-American Pet. Co.
Savannah	Open market from		12-31-24		
Seattle	$1.50 bbl.	$1.55 bbl.	12- 1-24		Shipping Board Station
Tampa	*1.50 bbl.	1.565 bbl.	1- 1-25	12-31-25	Mexican Pet. Corp.

Cargo Oil and Bunkers for Tankers Loading Cargo

Beaumont, Magpetco, Sabine	*1.45 bbl.	.....	1- 1-25	12-31-25	Magnolia Pet. Corp.

*Maximum price subject to decline in market.

FOREIGN PORTS
Fuel Oil

Port—	Terminal Price	Barge Price	Effective Dates From	Effective Dates To	Source of Supply
Aden	67/6 ton	.....	1- 1-25 to	12-31-25	Anglo-Persian Oil Co.
Almeria	70/- ton	.....	1- 1-25 to	12-31-25	Compania Petrolifera Hispano Americana
Amsterdam	$2.60 bbl.	$2.675 bbl.	1- 1-25 to	12-31-25	Standard Oil of N. J.
Antwerp	2.56 bbl.	2.635 bbl.	1- 1-25 to	12-31-25	Standard Oil of N. J.
Avonmouth	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.
Balbon	‡1.70 bbl.	.....	12- 1-24		Shipping Board Station
Belfast	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.
Bermuda	$2.15 bbl.	.....	7- 1-23		Shipping Board Station
Bombay	72/- ton	.....	1- 1-25 to	12-31-25	Anglo-Persian Oil Co.
Buenos Aires	$2.65 bbl.	$2.65 bbl.(a)	1- 1-25 to	12-31-25	General Pet. Corp.
Colombo	73/- ton	.....	1- 1-25 to	12-31-25	Anglo-Persian Oil Co.
Copenhagen	75/- ton	.....	1- 1-25 to	12-31-25	Anglo-Persian Oil Co.
Cristobal	$1.70 bbl.	.....	12- 1-24		Shipping Board Station
Durban	2.50 bbl.	.....	1- 1-24		Shipping Board Station
Glasgow	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.
Hamburg	$2.60 bbl.	$2.665 bbl.	1- 1-25 to	12-31-25	Standard Oil of N. J.
Honolulu	1.55 bbl.	.....	12- 1-24		Shipping Board Station
Liverpool	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.
London	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.
Manila	$2.00 bbl.	.....	12- 1-24		Shipping Board Station
Nordenham	2.60 bbl.	.....	1- 1-25 to	12-31-25	Standard Oil of N. J.
Ponta Delgada	2.20 bbl.	.....	10-15-23		Shipping Board Station
Rio de Janeiro	‡17.50 ton	$18.50 ton	1- 1-25 to	12-31-25	Caloric Co.
Rotterdam	2.60 bbl.	2.675 bbl.	1- 1-25 to	12-31-25	Standard Oil of N. J.
St. Thomas	1.80 bbl.	.....	1- 1-24		Shipping Board Station
Southampton	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.
Southampton	....	§80/- ton	9-13-24 to	3-27-25	British Mex. Pet. Co.
Tyne	†80/- ton	82/6 ton	10-15-24 to	4-30-25	British Mex. Pet. Co.

(a) Plus current rate.
†Effective 9-22-24 price reduced to 77/6 ton terminal, due to decline in market.
‡Metric ton.
§For SS Leviathan only.

DOMESTIC AND FOREIGN PORTS
Coal

Port—	Terminal Price	Barge Price	Effective Dates From	Effective Dates To	Source of Supply
New York	$5.89 ton	t.l.b.	6-15-24 to	6-14-25	Independent Coal Corp.
Ardrossan	19/- ton	f.o.b.	11- 1-24 to	10-31-25	A. & G. Anderson
Antwerp	26/7¼ ton	t.l.b.	7-15-24 to	7-14-25	Geo. Allan Hardy & Co.
Bremerhaven	*31/6 ton	t.l.b.	7- 1-24 to	6-30-25	Gueret (London) Ltd.
Glasgow	18/9 ton	f.o.b.	11- 1-24 to	10-31-25	A. & G. Anderson
Hamburg	25/9 ton	t.l.b.	7-15-24 to	7-14-25	Kohlen Koks and Anthracitewerke
Rotterdam	†26/- ton	t.l.b.	7-15-24 to	7-14-25	A. & G. Anderson

*Effective 11-14-24 price reduced to 29/- ton t.l.b., due to decline in market.
†Effective 10-27-24 price reduced to 22/6 ton t.l.b., due to decline in market.

CHICAGO MARKETING AND REFINING NOTES

CHICAGO, Feb. 7.—A. Roy Allison, who has been handling the sales to jobbers for the Stevens Oil & Greece Co., of Cleveland, Ohio, from his office in Chicago, will remove to the home office at Cleveland, February 1, to take charge of the entire sales management.

The Pure Oil Co., will remove its Chicago offices from the McCormick Building to 105 West Monroe St. in the Standard Trust Co. building on May 1. The new space will give them double their present office room with much less waste of space.

The General Oil Service Corp. has been incorporated for $50,000 to deal in refine and treat petroleum, products thereof and fuel oil. The incorporators are Otto C. Rentner, Emil F. Linn and Alfred O. Erickson, the latter being the correspondent with offices at 180 N. LaSalle St. The offices of the new organization are at 844 N. Rush St., Chicago.

PHILLIPS CO. REFUSES AWARD: PAYS FORFEIT

OKLAHOMA CITY, Okla., Feb. 7.—The Phillips Petroleum Co., which recently was held by the Commissioners of the Land Office to have the best bid on a quarter-section of State school land in Section 16-29-1w, Kay County, has declined to accept the award and forfeited to the State the $1,000 put up as earnest money. The company was refused the privilege of withdrawing the bid money between the date of opening bids and date of award.

The Commissioners have approved of the transfer from the Supreme Petroleum Co. to the Gypsy Oil Co. of an oil and gas lease to the east half of the southwest quarter of Section 36-15n-4e, Lincoln County, and from H. R. Cloughley to W. E. Conner of the northeast of Section 25-7-16 and parts of the southwest and southeast quarters of Section 26-7-16, all tracts in the vicinity of the Goteko Field in Kiowa County.

BUYS ENTIRE HOLDINGS

The H. F. Wilcox Oil & Gas Co. of Tulsa, has purchased the entire ownership of the J. C. Cooke Oil & Gas Co. as of December 31, 1924. The Wilcox company had formerly owned the controlling interest in the J. C. Cooke Oil & Gas Co., so that the transaction affected only about 10 per cent of the ownership in the latter company.

The principal holdings of the Cooke company were the Sac & Fox Agency farm, in Section 15-14-6, Lincoln County, Oklahoma, and two other leases with one drilling well on each in Lincoln County. They are the Carry Richards lease, Section 8-12-5, with a well drilling at 3,100 feet, and the Fuaquay lease, Section 20-14-14, with a well drilling at 2,465 feet.

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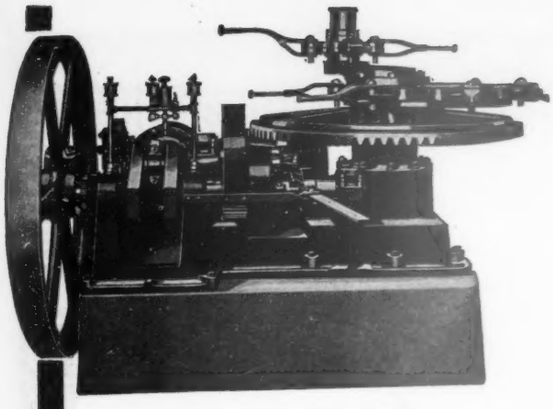

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PATTIN POWER

PENNZOIL CONVENTION HELD AT OIL CITY

OIL CITY, Pa., Feb. 7.—One of the largest company conventions ever held in Oil City was the Pennzoil sales convention held at the Venango Club attended by 115 representatives. A. S. Matthews, vice president and general manager of the New York State branch, acted as chairman.

Addresses were delivered at the opening session by E. R. Preble, A. S. Matthews, J. J. Fox, M. A. Brewster, H. L. Shamburg and R L Cary. W. S. Zehrung the company's chemist, gave an excellent talk on "Pennzoil Refining and Pennzoil Lubrication."

W. H. Fiske and C. H. Curry put on a sketch entitled "Bill Fiske sells a garage man" an excellent demonstration of selling talks in use against a hard to convince prospect.

Other afternoon addresses were by C. H. Dow of the Detroit branch and E. C. Connor, who described the work in Pittsburgh.

The evening addresses were by Arthur N. Day, Gordon Hargraves and C. L. Suhr, president of the company, who described the organization of the Penn Refining Co. in 1886, the organization of the Germania and in 1894 the consolidation of these two concerns, the formation of the Oil City Oil & Grease Co., the organization of the California Pennzoil Co. and finally the last consolidation of recent months.

Three of the first men connected with the Oil City Oil & Grease Co., from which the Pennzoil Co. developed were present. They are R. A. Brown, one of the directors; C. L. Suhr, the president, and D. J. Cavanaugh, the secretary of the Pennzoil Co. J. H. Brink of Indianapolis, who is forming the Indiana branch, was also present. He was for several years secretary of the New York State Petroleum Marketers' Association.

One of the oldest men in service in the marketing end of the oil industry in New York State was in attendance. Charles H. Russell of Buffalo, general salesman for the Pennzoil Co., Inc. Mr. Russell started with the Buffalo Lubricating Oil Co. on February 26, 1883, and was then associated with A. S. Matthew's father, Charles B. Matthews. These two were associates in business together for many years. Charles B. Kinne, manager of the Eastern division, who has been connected with Mr. Matthews for 14 years was also present.

OKLAHOMA NATURAL GAS CO. PROBLEMS

(Continued from Page 82)

so you see the loss to the consumer is very small.

Use of Compressors

Coming back to the lines again, I said before that the higher the pressure the smaller the pipe may be. But after a while we find that the wells, by their own pressure, will not keep up the pressure needed for the capacity of the line, so in comes more expense in the form of compressing stations. Considerable improvements have been added to the engines themselves and with the induction of the small units we are getting nearer to the proper use of compressors.

From the main lines the gas is routed to the various city plant distributing systems through the high pressure regulators, city border meters and low pressure regulators. The orifice meter is used in all city border stations with the exception of a few of the small towns where a positive meter handles the delivery. There are lots of problems with regard to gas measurements, but, as I said before, they comprise a subject in themselves and should be dealt with separately. However, in passing, I might relate a little difficulty we had in handling the vibrations due to the gas passing through the high pressure regulators at a terrific speed. Meters which checked ours were sometimes higher and sometimes lower than ours and it seemed rather hard to get them to stay together. After considerable experimenting a method was devised to take care of the situation. The meters in question were on the outlet side of the regulators a distance of about 30 feet. The idea was conceived that the trouble was caused by the action of the regulator in cutting from 150 pounds to 30 pounds, and that the gas, due to the regulator valve was swirling in the pipe and thus causing odd registrations, so another regulator was installed some 200 feet ahead of the station regulator, thus making two cuts in the pressure. A difference was noted immediately in the vibration of the differential pen on the chart and also in the quieting of the noise in the station. Also much better checks have been obtained on the meters ever since.

GROSS PRODUCTION TAX OF 6 PER CENT PROPOSED

OKLAHOMA CITY, Okla., Feb. 7.—A gross production tax of 6 per cent on oil and gas pipe lines in Oklahoma would be imposed by the State under a bill introduced in the legislature by Representative Sam F. Bailey of Pottawatomie County. The bill would increase the gross production tax on oil and gas from 3 per cent, as at present, to 4 per cent. The 4 per cent rate is made to apply also to electric concerns and mineral producers.

The bill requires quarterly reports of oil, gas and mineral producers showing names and locations of wells and mines, the gross production, actual cash value at places of production, amounts of royalties paid and to whom, with notation as to royalties exempt from tax. The gross production tax would be in lieu of all other local and State taxes. The bill provides that five-sixths of the amount received from oil, gas and mineral production would go into the common school fund of the State and that distribution of the remainder be made for State Government expenses and construction and maintenance of public roads in the communities where the minerals are produced.

KENTUCKY-TENNESSEE

(Continued from Page 50)

operators who have their scouts leasing acreage in the vicinity.

There was quite a bit of disappointment when the wildcat test of the Eastern Gulf Oil Corp. on the G. M. Ballard 400-acre tract in Jackson County, near the Rockcastle County line came in dry. There was only 14 feet of corniferous sand found.

A wildcat operation in Breathitt County drilled by Dukate, Black and others near the mouth of Quicksand Creek tested 75,000 feet of gas.

Lee-Owsley Counties

In district No. 35 of the Idamay section of Lee and Owsley counties, Hupp & Duff's No. 2 James Porter made 12 bbls. at an approximate depth of 1,200 feet; the same operators' No. 3 George Porter is a water well; the Black Gum Oil Co.'s No. 10 on the Gourley-Redman & McGuire tract was estimated at 12 bbls. at 1,200 feet.

Lawrence-Johnson Counties

In the North Weir Field of Lawrence and Johnson counties, Garrison & Townsend brought in No. 1 J. N. Sparks, district No. 22, for 22 bbls. from the Weir sand at about 700 feet. It extends several locations north of the C. K. Dobyne farm.

In district No. 33, the Indian-Tex Petroleum Co. finished its No. 3 Ira Lester at 789 feet where it was abandoned as dry. This same concern's No. 8 on the Jesse Rose tested 4 bbls. on power at 700 feet.

South Weir Field

In the South Weir Field, comprising parts of Johnson and Magoffin counties, the Structure Oil Co.'s No. 9 W. M. Prater in district No. 25 showed up for 6 bbls. from the Weir sand after being shot.

In district No. 31, the Virginia Gasoline & Oil Co.'s No. 4 Green Risner, made 10 bbls. flush at 792 feet, in the Weir sand.

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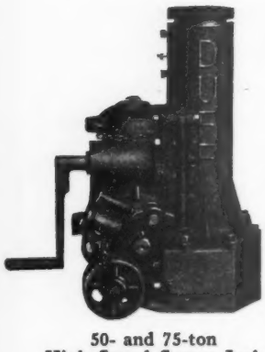

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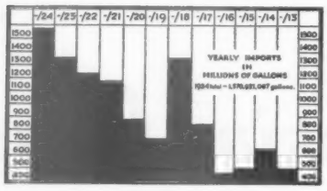
Petroleum Imports Into Great Britain Constitute Record

The official details of the petroleum import trade of the United Kingdom during 1924, as published in the accounts relating to the British trade and navigation, show that during the 12 months just ended British receipts of petroleum products from abroad constituted a record. The total was 1,570,921,087 gallons, compared with an import of 1,325,108,721 gallons for 1923. The total quantities last year were a little short of 6,300,000 tons. The accompanying diagram shows



the remarkable expansion that has taken place in Great Britain's petroleum import trade for the past 12 years.

The imports of the various products for 1924, compared with those of preceding year, are as follows:

	1924 Gallons	1923 Gallons
Illuminating oil ..	124,678,042	144,128,501
Motor spirit	422,310,541	327,233,670
Lubricating oil ..	101,746,917	82,222,696
Gas oil	67,084,264	70,746,090
Fuel oil	385,581,996	363,738,123
Crude oil	465,184,604	334,617,596
Other products ...	4,334,723	2,422,045
Totals	1,570,921,087	1,325,108,721

With the exception of imports of illuminating oil and gas oil, the receipts of all products show a marked increase, the advance of approximately 245,000,000 gallons last year over the previous year's figures beng mainly brought about by very substantial increases in the receipts of crude oil and motor spirit. In both cases the imports for 1924 constitute a record. In regard to the imports of crude oil, practically the whole of the 465,000,000 gallons received came from Persia and went either to satisfy the needs of the great refinery of the National Oil Refineries, Ltd., at Swansea, or the newer installation at Grangemouth. Crude oil imports have more than doubled during the past two years, last year's figures being as large as the total imports of all petroleum products in 1912.

The British motor spirit trade continues to expand, for despite the large quantities now produced at Swansea, the figures for 1924 are about 100,000,000 gallons ahead of those for the previous yaer. The increase is about equal to the total motor spirit imports in the United Kingdom 10 years ago.

Illuminating oil receipts continue on the down grade, last year's totals being about the smallest on record, excepting perhaps during a couple of years in the war period, but even then they were above the 120,000,000-gallon figure.

The receipts of lubricating oil show a gratifying growth, the increase of the imports of 1924 above those of 1923 being about 20,000,000 gallons, or a 25 per cent increase. Fuel oil continues to make steady headway, the figures for last year being nearly double what they were 10 years ago. In 1910, 1911 and 1912, the yearly average receipts of fuel oil were only 40,000,000 gallons.

Gas oil imports show no improvement, last year's figures being about the same as those of 10 years ago, but less than those of more recent years.

The values of the petroleum products imported last year were over £41,000,000, as shown in the following table, the figures for 1923 being included for comparison purposes:

	1924 Values in £	1923 Values in £
Illuminating oil ...	2,958,113	3,150,219
Motor spirit	17,846,469	15,827,396
Lubricating oil ...	5,869,526	4,746,215
Gas oil	1,197,371	1,085,347
Fuel oil	5,603,883	4,788,994
Crude oil	7,752,387	5,269,791
Other products ...	197,366	93,968
Totals	41,424,815	34,961,930

The receipts of paraffin wax during 1924 amounted to 1,366,547 cwts., of a total value of £1,699,915, compared with the 1923 receipts of 1,145,612 cwts., valued at £969,527.

During the year 108,000,000 gallons of petroleum products were exported from the United Kingdom, compared with 76,000,000 gallons exported during 1923. Last year's values of these exported products were approximately £3,400,000.

LOGAN FAMILY RICHEST FROM OSAGE OIL LAND

WASHINGTON, D. C., Feb. 7.—The Logan family, members of the Osage Indian tribe in Oklahoma, has the largest annual income of any Osage Indian family, according to the records of the Interior Department.

The minerals, including oil and gas underlying the Osage Reservation, embracing approximately 1,400,000 acres of land is reserved to the Osage tribe as a whole, and is distributed quarterly among 2,229 enrolled Indians or their heirs. The revenues from oil and gas vary each year according to the production and price of oil, and during the past year has aggregated approximately $12,000 each.

In the case of the Logan family the husband has inherited shares from deceased relatives in addition to his own, making his annual income at the present time $28,000. His wife also has inherited shares bringing her total income to $30,000 annually. One minor child has one share aggregating $12,000, the total for the family aggregating about $70,000 representing bonuses and royalties on oil and gas leases during the past year.

According to the Indian Office a part of the income of this family, because of the fact that he is a restricted Indian, is held for him in trust by the Secretary of the Interior, the moneys actually paid being $4,000 each the husband and wife annually from their respective shares, and the parents are also allowed $2,000 from the minor's share for her maintenance and education, the remainder being conserved for her future needs by the Government.

Another individual full-blood Osage Indian woman, Mary Elkins, by name, about 25 years of age, under guardianship, inherited 7½ shares in addition to her own, and therefore receives at the present time, approximately $102,000 per annum.

IOWA OIL MEN TO MEET

The anual convention of the Iowa Independent Oil Men's Association will be held at the Fort Des Moines Hotel, Des Moines, Iowa, February 12 and 13.

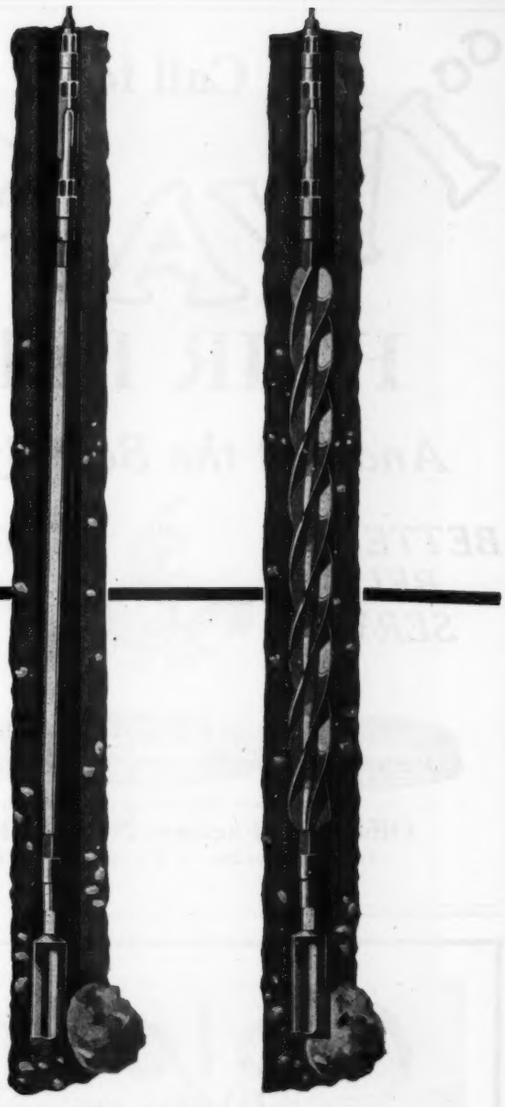
An unusually good program has been arranged for the 2-day session and includes several addresses of importance. F. A. Pielsticker will discuss "Marginal Contracts" on Thursday, and Harry Smith will speak on "The Federal Conservation Board and Its Effect" Friday. L. V. Nicholas will also talk on "Why We Must Develop an Industrial Viewpoint." Glen Haynes will discuss "The Program of the Iowa Good Roads Association." An elaborate banquet will be given through the courtesy of the Des Moines oil jobbers.

The membership of the association now numbers 120, according to L. F. Kuehnle, president.

STANDARD STOCK TO WORKERS

Employes of the Standard Oil Co. of New Jersey, as a result of the company's plan under which it enables workers to buy the stock of the organization, are receiving the opportunity to subscribe to the common stock on the basis of $35 a share. This is approximately $10 a share less than the stock is quoted in the open market. In addition to offering the stock to employes at considerably below the market price, the company pays into the fund 50 cents for each dollar paid in by the employe. This is the fifth annual offering of the stock to employes. Subscriptions are limited to an amount equal to 20 per cent of the pay of the subscriber.

Note how it prevents crooked holes



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The SPIRAL STEM has been on the market about 2 years. In this relatively short period it has earned universal recognition as a practical and important improvement in Cable-Tool drilling practice. Today you will find SPIRAL STEMS in use by progressive operators in every "crooked hole" section in the country.

We believe that the SPIRAL ROTARY DRILL COLLAR, also invented and patented by Mr. Nebergall, and applying the same principle to *rotary* drilling, is destined to win success in its field. Its success to date has repeated, in every particular, that of the SPIRAL STEM.

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However, to answer the misgivings of those who have foreseen a serious fishing problem in the event the SPIRAL CABLE TOOL STEM or SPIRAL ROTARY DRILL COLLAR should break across the wings, the Titusville Forge Company manufactures a special FISHING TOOL, which takes instant grip on all four SPIRAL WINGS and can be depended upon to retain firm hold on the fish, regardless of how heavy the pulling may have to be.

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NORTH CENTRAL TEXAS

(Continued from Page 38)

Boyer, drilling at 1,900 feet; same company's No. 1 Streit, drilling at 1,800 feet.

Baylor County: Harris and others' No. 1 Howe, drilling at 750 feet; McCaldin and others' No. 1 Martin, spudding; Richardson Brothers' No. 1 Wallace, drilling at 795 feet; Skinner and others' No. 1 Martin, drilling at 1,335 feet; Staley and others' No. 1 King, spudding.

Clay County: Ashcroft and others' No. 1 Chilson, drilling at 860 feet; Mills and others' No. 1 Holloway, drilling at 350 feet; Lone Star Gas Co.'s No. 46 Byers has an oil showing at 1,710 feet; same company's No. 21 Martin, cementing casing at 1,650 feet.

Montague County

Daniels and others' No. 1 Howard, underreaming; Mitchell and others' No. 1 Hinds, spudding; Owenwood Oil Corp.'s No. 1 Salmon, drilling at 500 feet; Petroleum Production Co.'s No. 1 Howard, drilling at 2,000 feet; The Texas Co.'s No. 3-A Gist, drilling at 880 feet; same company's No. 1 Salmon, drilling at 960 feet; Texhoma Oil & Refining Co.'s No. 2 Howard, underreaming.

Throckmorton County: Larkin and others' No. 2 Richards, drilling at 720 feet; McGee and others' No. 1 Martin, drilling at 200 feet; McKnight and others' No. 1 Haley, drilling at 1,360 feet; Plains Production Co.'s No. 1 McElroy, drilling at 1,290 feet; Rider and others' No. 1 Stubblefield, drilling at 520 feet; Skinner and others' No. 1 Mitchell, drilling at 930 feet; The Texas Co.'s No. 1 Smythe, drilling at 1,350 feet.

Shackelford County: Cerf and others' No. 1 Poindexter, underreaming; Hogan and others' No. 1 Elliott, drilling at 530 feet; Humble Oil & Refining Co.'s No. 1 Green, drilling at 3,260 feet.

Palo Pinto County: Britton and others' No. 1 Strawn Coal Co. fishing at 3,120 feet; Hart Oil Corp.'s No. 1 Hart, drilling at 150 feet; Phillips and others' No. 1 Stringer, drilling at 920 feet; same company's No. 1 Caudill, cleaning out at 3,555 feet.

Callahan County: Bryon Union Oil Co.'s No. 1 Hennessey, drilling at 4,380 feet; Prewitt and others' No. 1 G. T. Crane, fishing at 1,880 feet; same company's No. 1 W. W. Crane, underreaming; Eastland Oil Co.'s No. 2 Keynard, drilling at 415 feet; Harris and others' No. 2 Brown, setting casing at 300 feet; Sloan and others' No. 3 Miller, drilling at 2,800 feet; California Co.'s No. 12 Morrison, drilling at 1,150 feet; same company's No. 1 Elder, drilling at 1,620 feet.

Brown County: Gillman and others' No. 7 Newton, cleaning out at 1,290 feet; Williams and others' No. 1 Newton, drilling at 725 feet.

Reagan County: Big Lake Oil Co.'s No. 16 University, drilling at 685 feet; same company's No. 17 University, drilling at 1,650 feet; same company's No. 18 University, drilling at 510 feet; California Co.'s No. 1 University drilling at 2,945 feet; Hoffman and others' No. 1 University, drilling at 450 feet; Hughes Development Co.'s No. 1 University, drilling at 2,370 feet; Simms Oil Co.'s No. 1 Sawyer, drilling at 1,500 feet; Texon Oil & Land Co.'s No. 4 Group 1 University, drilling at 1,880 feet; University Oil Co.'s No. 1 University, drilling at 2,370 feet; Wrightsman and others' No. 1 Ingham, drilling at 975 feet.

MEXICAN FIELDS

(Continued from Page 38)

hopes that in the omnipotent future it will pay out. Right here, if a recollection of the past is in order, I recall, in listing well completions of a week, several years ago, that I casually referred to a 500-bbl. well of the East Coast Oil Co., (Southern Pacific), as a "jitney." Professor W. F. Cummings, chief geologist of the East Coast at the time, took me sternly to task when it came to his view. He asked why, and I referred to the fact at that time that only gushers of at least 1,000 bbls. were really counted or considered, but as a matter of courtesy, I had put this one in the producer column. He said: "You will live to see the day that a 500-bbl. well here in Mexico will be highly considered and nursed to its last barrel."

I have!

The Failures

The failures, like all failures, are of little use in recording. Suffice it that La Corona Petroleum Co. had one in the Cacalilao sector. International Petroleum Co. can record three there. Mexican Gulf Oil Co., one. Mexican Sinclair Petroleum Co., two. In the older Panuco sectors, East Coast Oil Co., and Transcontinental Petroleum Co., one each.

In Corcovado, Mexican Gulf Oil Co. has in its No. 2, Lot C a dry hole at 2,400 feet. National Lines, in its No. 5 Chapacao, on its right-of-way has a dry hole at 2,505 feet. Mexican Petroleum Co.'s No. 5 Margaritas is a failure in the Ebano sector at 2,501 feet, officially marked "shut down for orders"; and in its No. 1 Tancasneque, north of the Tamesi River, it has decided to call it a day and abandon at 3,270 feet, in the Tamasopa since around 2,000 feet, and with salt water standing in the hole.

Drilling Features

Of the drilling wells as the week ended about the only comment that can be made that the usual routine is deadly as usual, with these possible exceptions: La Corona Petroleum Co.'s No. 4, Lot 7 Corcovado, is in the Tamasopa lime and heading 200 bbls. This is encouraging although the pessimist will point the accusing finger at the depth. The same company, was down south of Topila, in Los Cues, had a small show of oil and salt water at 3,054 feet in its No. 4 there. The formation is the San Felipe, and—funeral baked meats doth coldly set forth a feast!—once more the depth and the formation in other words.

Other operations, whether in the north or south fields, are strictly routine.

Distinguished Visitors

Edward L. Doheny, father of commercial production in Mexico, and Herbert G. Wylie, whose energy made it patent, were visitors here the past week. They arrived in Mr. Doheny's private car, accompanied by their wives, and spent a short time at the southern holdings of the Huasteca Petroleum Co., and the terminals of that company at Tampico, and then, departing, spent a little time at Ebano. From there the two heads of the Pan American interests proceeded to Mexico City.

Notes

A. Wessly, a paymaster of the Transcontinental Petroleum Co., was held up Saturday morning last at the aviation field in this city, as he was about to board an airplane for the fields and relieved of 40,000 pesos, ($20,000 United States currency). The fields are in the immediate vicinity of Tampico, within the city limits. The robbers escaped in an automobile.

Lyle Clark, 36, driller, was killed on a rig of the Penn Mex Fuel Co., in the Tuxpam district. He was hit by a piece of falling timber. He was buried in the company's cemetery at Zapotal. It is understood that his mother, who is said to reside in Council Bluffs, Iowa, survives. He is said to have been in Mexico only 10 months.

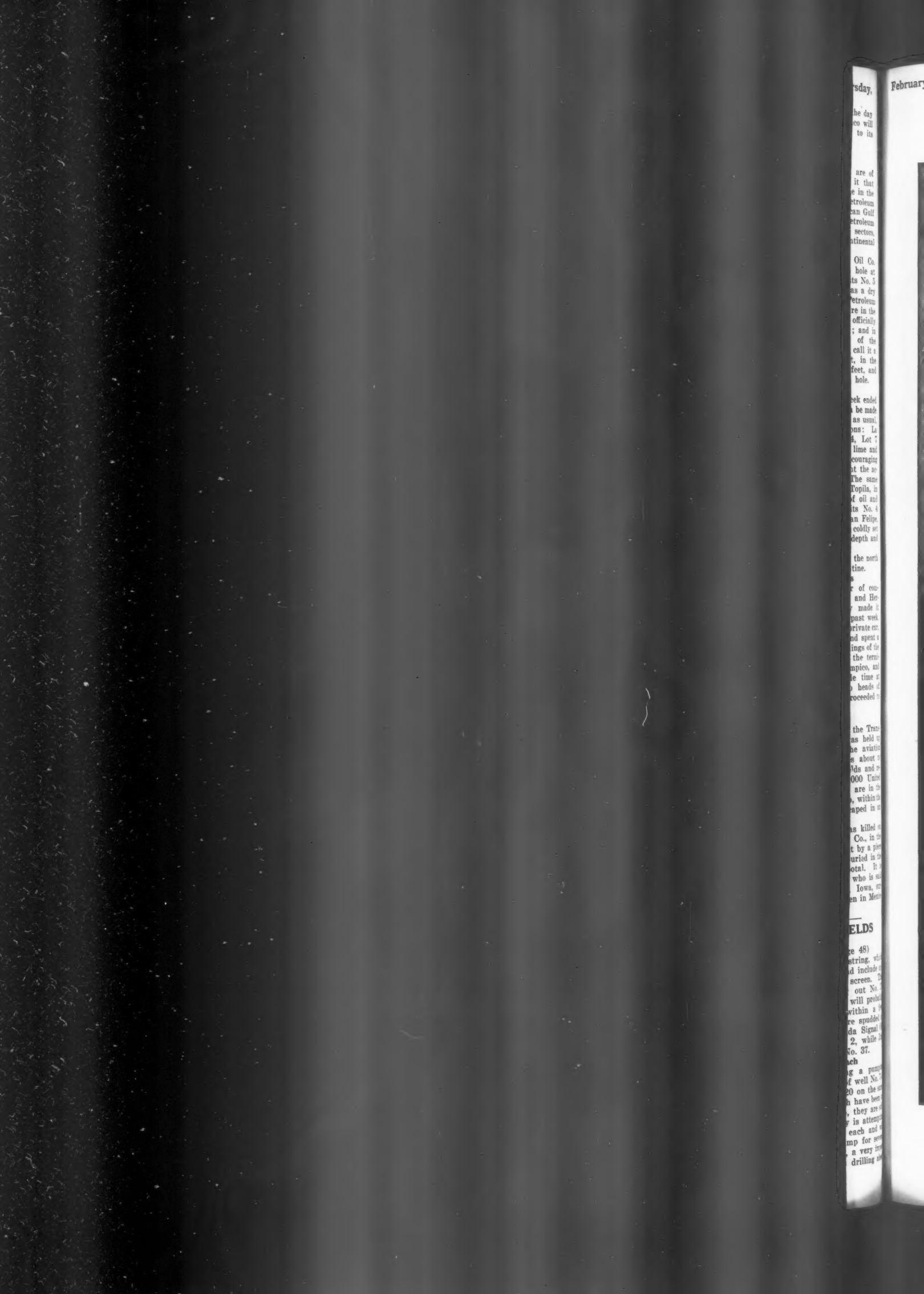
CALIFORNIA FIELDS

(Continued from Page 48)

running in a 4¼-inch oil string, which will be landed on bottom and include approximately 1,000 feet of screen. The Shell has finished cleaning out No. 17 Alamitos to 4,601 feet and will probably make a production test within a few weeks. The new wells were spudded in during the week, the Nevada Signal Oil Co. starting work on No. 2, while Jim O'Donnell spudded in his No. 37.

Huntington Beach

The Standard is making a pumping test at Huntington Beach of well No. 7-B on Lease B and well No. 20 on the same property and, although both have been on the beam for a week or so, they are still water wells. The company is attempting to exhaust the water in each and will keep them pumping to sump for several more days. No. 20 Bolsa, a very important test on this lease, is drilling ahead



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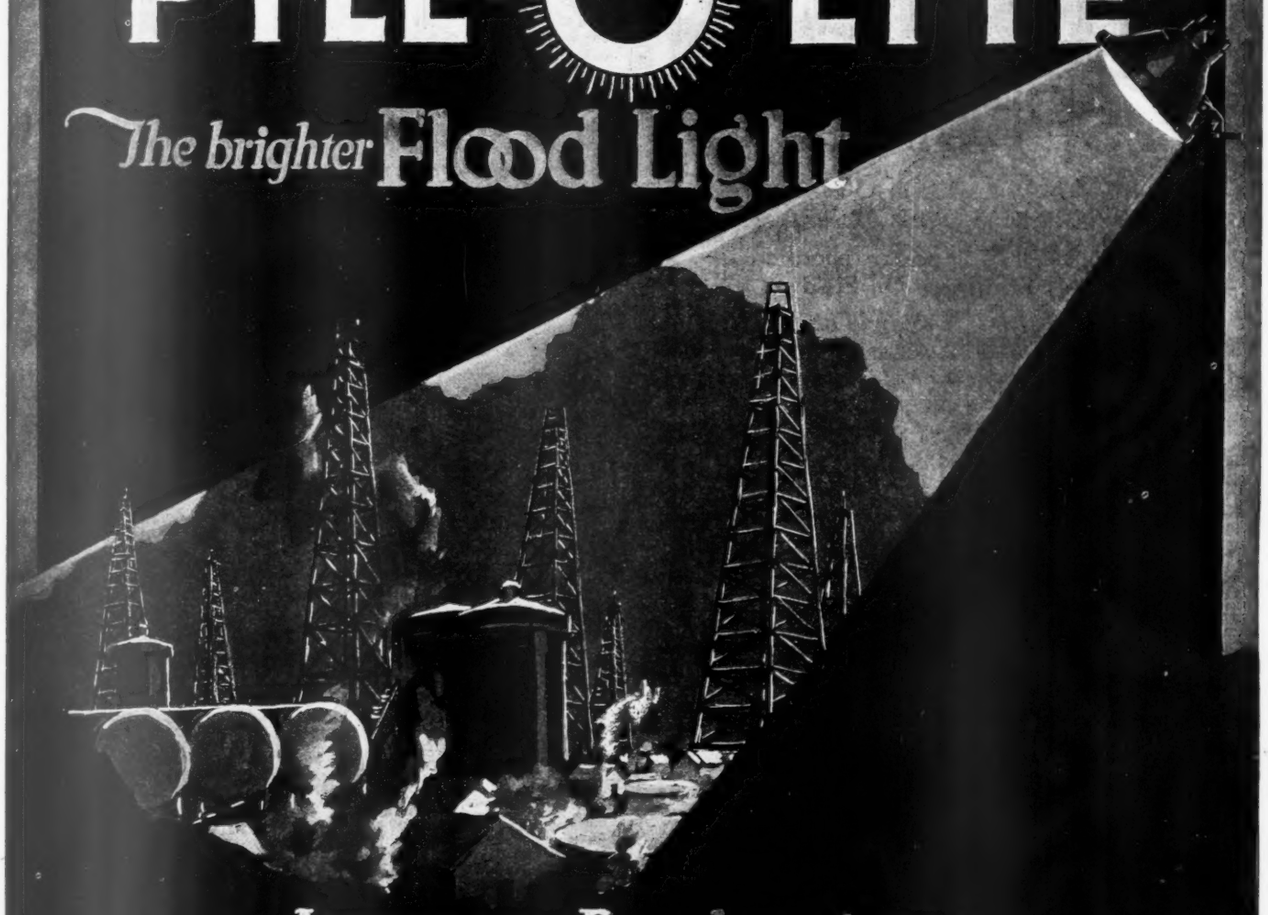

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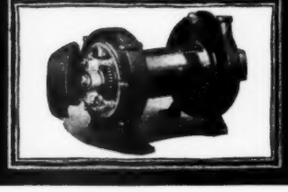

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at 4,930 feet in a hard shale and the outlook for a completion of this hole, which is scheduled to extend the limits of the field, is not very encouraging. The General Petroleum is drilling in an oil sand in No. 2 Dabney at 3,442 feet and the company should recomplete this well within a short time and spud in No. 4, now being rigged up. The Southern California Drilling Co. is making excellent progress with No. 3 Riggle and reports 2,145 feet of hole. There were no developments of importance at Santa Fe Springs and the only thing of interest was the abandonment of No. 3-A Johnson, drilled to 4,702 feet by the Standard Oil Co. and the preparations being made by the same company to follow a similar procedure with No. 2 Walker, which has been standing idle for some time at 4,416 feet.

Inglewood

The latest entrant into the Inglewood area is the Universal Oil Co., which has staked a location and will start drilling soon on its acreage northwest of the Pan-American's Sentous property. The latter is building a rig for No. 2 Sentous and is grading for No. 7. The Standard has both its producers, No. 1 on the Los Angeles Investment Lease No. 1, and No. 1 Vickers, on steady production, but the Mohawk's No. 1 Machado is pumping only intermittently, due to sand. No. 2 Machado of the Mohawk is being rigged up, while the Standard is erecting a rig for No. 1 on Vickers lease No. 2, an offset to the Mohawk's present producer. The Standard is also building a rig for No. 2 on Vickers lease No. 1, and although construction has only just started on this derrick work is a little more advanced on the rig for No. 2 on the Los Angeles Investment Lease No. 2. No. 1 on the latter property is drilling ahead in a hard, sandy shale at 4,734 feet but it has so far been devoid of any developments of interest. No. 1 Potter-Smith at 5,777 feet is the deepest of the Standard's holes in this area and it has all the earmarks of a duster. No. 1 Stocker at 4,200 feet is also rather disappointing, although this well should be a deep one if the sand is picked up at all. No. 3 on Los Angeles Investment Lease No. 1 is moving ahead at 2,335 feet and, judging by indications, will be the deepest of the present holes on this lease. Oscar Howard and the Petroleum Securities are just getting under way, the former's No. 1 Machado at 400 feet and the latter's No. 1 Cone at 600 feet, but are making good footage. The Petroleum Midway is putting the finishing touches on the rig for No. 1 Smith and judging by the work of this company in other fields, the hole will be pushed to completion. The Pacific Oil Co. is making hole in No. 2 Baldwin in a sandy shale at 2,620 feet. The Standard has started surveying the route for its new 8-inch line from Inglewood to the El Segundo Refinery, a distance of about 7 miles and, while actual construction work has not yet started, the preliminary work is all being disposed of so there will be no delay when the decision is made to go ahead.

Whittier

It was expected that the Standard would have finished No. 21 Home at Whittier during the past week, but instead of making a test at 3,995 feet, the company resumed drilling and will prospect for a deeper sand. If, however, deep production is not secured, the company should be able to finish a fairly good well around 4,000 feet. The hole is down 4,085 feet. The Ocean View Oil Co. cored a very nice sand between 3,448 feet and 3,478 feet and concluded drilling at the latter depth. The company is making preparations to land a string of 6¼-inch, preparatory to making an early test. The Central Oil Co. has not yet spudded in No. 74 but will do so within a few days. There is little work of interest at Rideout Heights and the number of crews working in that area is getting smaller from time to time. The Associated is still working with No. 1-A Gregg at 3,739 feet and the Pan-American is going ahead in No. 1 Jesurum at 4,245 feet. The Petroleum Midway has recemented the 6¼-inch in No. 1 Hamburg and is perforating No. 1 Witte.

The Standard finished No. 63 Baldwin in the Montebello Field last week but it only proved to be a 72-bbl. pumper, the oil testing 23.4 degrees and cutting 6 per cent. It was drilled to 3,899 feet and finished with an 8¼-inch oil string and 2,604 feet of 2½-inch tubing. Work has been suspended on No. 60 Baldwin at 4,703 feet but the company is plugging back No. 62 from 4,525 feet to around 4,100 feet. No. 1 Howard-Smith at 4,206 feet is being bailed for a water test. The Standard has not yet drilled out No. 100 Murphy at Coyote but is going ahead in No. 101 at 2,670 feet in No. 102 at 3,200 feet and is making hole in No. 40 Emory at 3,206 feet. The Union's deep test at Coyote, No. 85 Graham & Loftus, is now drilling at 5,527 feet with a good chance of securing commercial production.

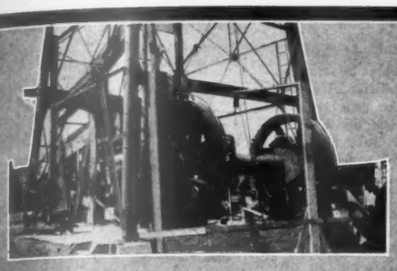
The General Petroleum has closed a deal with the Merchant's Petroleum Co. by which the former will deepen the latter's No. 1, now at 3,210 feet, in order that a thorough test may be made of this well in the eastern part of the Richfield district. The Chicksan Oil Co. started a revival of drilling in this field by completing No. 1 Bradford as a deep zone producer several months ago. The company's success with No. 1 has resulted in the drilling of a second hole, No. 2 Bradford, which is going ahead at present in a stick shale at 2,345 feet. Several other Richfield operators are taking advantage of the Chicksan's discovery and are either deepening former producers or have started new wells. The Chanslor-Canfield Midway is deepening No. 1 Bradford, a former producer at 4,117 feet and, although no new hole has yet been added, the company is making good progress redrilling around 4,050 feet. The General Petroleum is drilling ahead in No. 6 Thompson at 2,930 feet, while the Standard is working on No. 2 Collins and Nos. 3 and 18 on Kramer Lease No. 2. The Union has staked a location for No. 1 Olinda in the Fullerton Field and is building a road to the site of its first test on this recently acquired property. The Berea Canyon Oil Co. spudded in its No. 38 during the early part of the week and the log shows 300 feet of hole and the usual hard sandy formation characteristic of this lease.

Newport

The Interstate Oil Co. has found that its No. 1 Mesa is capable of producing 70 bbls. of 11.4 gravity oil from the 712-foot level for a short period, but it is not known whether this pumping can be maintained over a long period. The well was only on the beam for six hours but, as this is the most satisfactory pumper yet finished in this area, it will be given a thorough test. The Interstate Oil Co. was one of the early pioneers in this territory and its operations have extended over five or six years. The Bruce Oil Co. is having a little trouble with its initial hole at 457 feet and is experiencing the usual difficulty in attempting to pump this heavy oil. The South Basin Oil Co. has two intermittent pumpers in Nos. 1 and 2 from 1,165 feet and one driller, No. 3, standing cemented at 950 feet. The Newport Petroleum has resumed work on its mine and has a 240-foot tunnel. The Shell's No. 2 Bryant at Seal Beach is still quite active and at times threatens to duplicate its blowout of a few weeks ago. No. 2 Bryant was drilled to 4,396 feet, at which depth the gas pressure was encountered. No. 1 Bryant is flowing 60 bbls. of oil and 1,700 bbls. of water from 4,620 feet, while No. 3 on the same lease is drilling ahead at 2,900 feet. No. 1 Bixby is flowing salt water from 6,142 feet and will ultimately be listed as an abandonment.

Miscellaneous Drilling

The Wilshire Oil Co. is making good footage on its second dry hole at Bandini and, although the company has reached a depth of 5,255 feet in this wildcat, it is still going ahead. The Shell reports a depth of 4,801 feet in No. 1 Virginia at Los Cerritos, northwest of Long Beach, and the formation to be a hard sand. The Marland is drilling ahead in sticky shale at 2,988 feet in No. 1 Davidson, near Davidson City, but does not expect to pick up anything above 3,500 feet. The Beatty Oil Co. is drilling ahead in a granite formation at 5,007 feet in its



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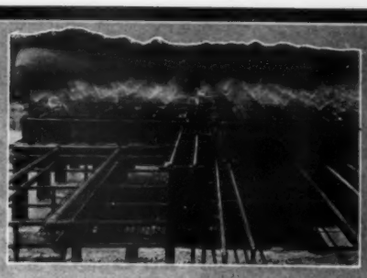

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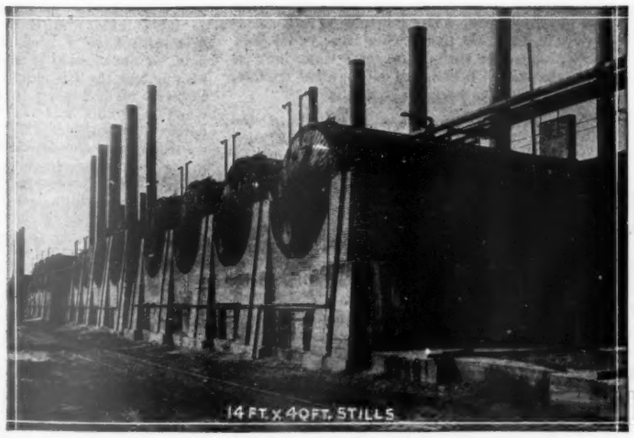

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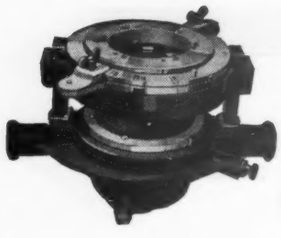

No. 30

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No. 30 Beaver is a Ratchet Die Stock built especially to cut threads of 11½ thread pitch only on 2, 2½ and 3 inch tubing or standard pipe. It is built on the same principle as all other self-contained and adjustable Beavers, using narrow receding dies. A gear, such as is used in the large Beavers, is not used in No. 30 owing to the light thread required.

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No. 1 Calwin, at Eagle Rock and, although the formation precludes the possibility of securing oil, the hole is being carried on down. This wildcat is starting its fifth and, in all probability, its last year. The Winwell Oil Co. reports that cores taken in its Hawthorne wildcat show streaks of oil sand but, notwithstanding, the hole is not given much change because of its present depth, 5,557 feet. It is believed quite possible the company will make a production test in the near future. The Manhattan-Pacific at Hermosa Beach was drilled out and recemented at 2,800 feet, following an unsuccessful water shutoff. The Bixby-Midfield Oil Co.'s No. 1 Duncan at Los Alamitos, is drilling ahead in a sticky shale at 2,780 feet.

Wildcat Drilling

The Associated has passed the 3,065-foot level in its Newhall wildcat but, notwithstanding rumors credit the well with oil and gas showings, the log does not show any favorable indications. The Union's Saugus wildcat, several miles away, is making unusually slow progress and the bit is in a blue shale at 1,400 feet. The Union started work in the Ocean Park Heights area early in the week by staking out a location for its first test in this area. The initial hole will be drilled 150 feet from the center line of Grand View Boulevard and 150 feet from the southeast boundary line of the Guerney Newlin property. The Standard, Marland, Petroleum Midway, Associated, and several others all have acreage tied up in the general area. The Standard is getting close to 5,100 feet in No. 1 Kruise at Lost Hills, Section 5-27-20, and because of its depth and the absence of oil and gas, the outlook it not any too promising. The Union is making good time at Rio Bravo on its wildcat, Section 4-29-25, and, although 5,372 feet of hole has been made to date, no favorable indications have been noted. The Pan-American's No. 1 Parkford on the Kern River Bluff, south of Bakersfield, has just passed the 4,900-foot level and has only an outside chance of securing commercial production. The St. Helens, on Section 14-29-28, is at 3,725 feet, while the Marland, on Section 36-28-28, is claning out its 2,660-foot hole. The Shell reports a depth of 3,306 feet in No. 1 Mountain View, in the Weed Patch area, Section 33-30-29, but has not found any oil or gas indications. The Snowolene, on Jacalitos Dome, is going ahead slowly at 3,955 feet. The General Petroleum ran into a fishing job in No. 1 Oschener, its Kettleman Hills wildcat, at 6,197 feet. This hole, rated as a prospective duster for some time, may be abandoned because of mechanical trouble.

Field Operations

Oil field operations reported to the State Oil & Gas Supervisor show 19 new wells started, as compared with 10 during the previous week, bringing the total for the current year to date to 85, as compared with 151 at the same date last year. Of the 19 notices to drill filed this week, two were for wells in the Rosecrans Field, three in the Inglewood Field, one each in the Montebello, Huntington Beach, Newport, Fullerton, Richfield and Dominguez Fields, in Los Angeles County, three in the fields of Ventura County and four in the fields of Kern County. There were 34 water tests made, as compared with 25 during the preceding week. Deepening or redrilling jobs totaled 17, the same as during the previous week, while abandonments totaled nine, an increase of four over the period just preceding. Permits were issued for the following new wells:

Rosecrans
Location, company, Well—
7-3-13 Marine Corp. 34.
7-3-13 The Twin State Oil Co. 1.
Huntington Beach
Southern California Drilling Co.—
2-6-11 Riggle 2.
Inglewood
7-2-14 Oscar R. Howard 1.
Petroleum Securities Co.—
8-2-14 Cone 1.
7-2-14 Mohawk Oil & Gas Synd. 2.
Dominguez
Marland Oil Co.—
3-4-13 Dominguez 7.
Montebello
6-22-11 McGinley Oil Co. 20.
Los Angeles County
11-7-13 Antelope Oil & Gas Co. 2.
Newport
28-6-10 South Basin Oil Co. 5.
Fullerton
2-3-10 Brea Canon Oil Co. 27.
Richfield
Standard Oil Co.—
32-3- 9 Kramer-2 19.
Ventura
Associated Oil Co.—
27-3-23 Lloyd 15.
Sespe
33-5-19 White Star Oil Co. 19.
Piru
Temescal Pet. Co.—
4-4-18 Landers 2.
Midway-Sunset
30-12-23 Atlas Oil Co. 7.
36-32-23 Formax Oil Co. 7-A.
27-31-22 Gilmore Oil Co. 1.
Elk Hills
Union Oil Co.—
26-30-24 Elk Hills 10.
The following holes were abandoned:
Long Beach
30-4-12 Guy Powell 5.
24-4-13 Oregon Oil & Development Co. 4.
Torrance
George F. Getty, Inc.
14-4-14 Torrance 18.
Dominguez
32-3-14 A. Otis Birch 1.
Richfield
Union Oil Co.—
34-3- 9 Yorba 2.
Midway
36-32-23 Formax Oil Co. 7.
Lost Hills
13-26-20 Associated Oil Co. 18.
Kern River
9-29-28 M. H. Hannaman 4.

EAST CENTRAL TEXAS

(Continued from Page 46)

at 2,976-3,003 feet, 41 bbls. the first hour.

Magnolia Petroleum Co.'s No. 17 Boyd, sand at 3,000-22 feet, 532 bbls.

Murchison & Fain's No. 2 Simmons, sand at 2,940-85 feet, 150 bbls.

Humphreys-Boyd Oil Co.'s No. 6-B Smith, sand at 2,989-3,013 feet, 420 bbls. the first hour.

Same company's No. 8-B Smith, sand at 2,987-3,015 feet, 720 bbls. in two hours, later in the day 125 bbls. an hour.

Same company's No. 5-A Wilson, sand at 2,998-3,018 feet, 125 bbls.

L. P. Hammond's No. 1 Staley, subdivision 20, Block 13, Wortham Townsite, dry and abandoned at 3,027 feet. No. 2 on the same property abandoned as dry at 3,055 feet.

The Humble Oil & Refining Co. abandoned its location for No. 5 Dodd, Nos. 1 and 2 E. G. Crouch.

Only about 60 wells remain to be drilled in the Wortham Field to complete the drilling operations in this area. After that the field will settle down to a productive basis with a very gradual decline in output as the weeks pass. It is expected that by the time all the wells on the inside area are completed and producing, the field will be down to 50,000 bbls. a day. With Wortham at 50,000 bbls.; Powell at 58,000; Mexia at 25,000 bbls.; Richland at 12,200 bbls, and Currie at 3,250 bbls. the East Central Texas area will have a production of 148,450 bbls., or about what it was producing last May before the Richland Field had begun to have an influence on production and when Wortham was not considered as a potential producer. Five fields are expected by the closing days of this month to be producing what three fields were nine months previously.

Very few of the last general crop of wells will come in flowing. Pumping will be resorted to in most of them except where the fluid level is high enough to make the application of air practicable. There does not seem to be the same degree of water pressure in Wortham that there was in Powell and which made the air method of recovery so successful in that field.

The north end of the field was given a better appearance when the Humble Oil & Refining Co.'s No. 7 Dodd came in at 137 bbls. an hour, and the chances are good that the Humble acreage for a thousand feet northeasterly will be good for paying production. The Humble's Ellis Dodd lease with five wells on it was producing 9,806 bbls. a day on January 31, when a general roundup of production by lease was made. On that day the Humble had 15,842 bbls. production. On the same day the Humphreys Boyd Oil Co. had 20,961 bbls. These two companies and the Magnolia with 6,646 bbls. had one-half the production of the field as of that day.

Very little premium paying is heard of in the Wortham Field. It is currently reported that the Rio Bravo Oil Co. is receiving a bonus from the Peerless Oil & Refining Co. and the Clayton Oil &

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Refining Co. but this cannot be authenticated.

The most interesting wildcatting news of the week was that the Humble Oil & Refining Co. is taking up a block of acreage between Kosse and Groesbeck.

Old Dry Holes Abandoned?

In Bowie County the Hooks Oil & Gas Co. has abandoned its test on the LaPorte farm, Bartman survey, at 2,400 feet, and the Tri-State Oil Co. its Taylor test on the Collum survey, at 2,830 feet. The Boyd Oil Co.'s No. 1 Thompson, on ahe Barkman survey which was shut down a long time at 3,007 feet has been abandoned. This leaves two tests in Bowie County, the Dalby Springs Oil Co.'s No. 1 Parkey, last reported at 2,400 feet, and the Delaney Oil & Gas Co.'s No. 1 Rochell, McKinney survey, shut down at 2,295 feet.

In Delta County the only test, that of J. E. McNeill on the Patrick farm, Hodges survey, was abandoned at 3,007 feet.

The lone test in Franklin County, J. E. McNeill and others' No. 1 J. E. Harper, Clift survey, was abandoned at 3,020 feet.

In Henderson County the Richardson Brothers' No. 1 Eade, Southland survey, was abandoned at 2,700 feet. This leaves one test in that county, F. Haynes' No. 1 V. Bounds, Jeffreys survey, shut down at 1,948 feet.

In Hopkins County The Texas Co.'s No. 1 Enix, Hoile survey, was abandoned at 3,760 feet; The Texas Co.'s No. 1 Worsham, Hough survey, abandoned at 3,730 feet; Gulf Production Co.'s No. 1 W. J. Davis, abandoned at 3,411 feet; The Texas Co.'s No. 1 Moncreif, Gaines survey, abandoned at 3,760 feet. This leaves Kelsey and others' No. 1 Brooks, Dowdle survey, shut down at 1,270 feet, the only operation in the county.

New Work in Hunt County

In Hunt County the Gulf Production Co.'s No. 1 Cannon, Ragsdale survey, was abandoned as dry at 3,430 feet. A number of new operations are reported from this county including the Gulf Production Co.'s No. 1 Alexander, Tidwell survey, drilling below 2,760 feet. Gulf Production Co. and Atlantic Oil Producing Co.'s No. 1 Meadows, J. Levins survey, spudded in; Marland Oil Co.'s No. 1 fee, J. Hamilton survey, a rig up; Gulf Production Co.'s No. 1 Bryan, James Cole survey, drilling below 2,640 feet. Tullal & Kelsey have a test started on the N. Barnett farm, Parsons survey.

In Kaufman County two old failures have been definitely abandoned, J. P. Germany and others' No. 1 Kirby, Edens survey, at 3,250 feet and Skinner & Lyles' No. 1 Barrow, Terrell survey, at 3,717 feet.

In Rains County the McLaughlin & Lyles test on the Dowell farm, McMahon survey, was abandoned at 3,575 feet.

In Wood County, The Texas Co.'s No. 1 Senter, Whittaker survey, was abandoned at 2,510 feet.

All the above named abandoned wildcats have been shut down for a long time and were known to have been given up as failures, but they have been carried on the records until final action was taken. The report of their abandonment is more a matter of clearing up the record than as a matter of news. There are a number of other tests in the outside East Central Texas territory that might as well be stricken from the record as they are too deep for any possibility of oil, but they are still in condition where the owners could move in and deepen them, so they remain on the roll.

KANSAS FIELDS

(Continued from Page 34)

Backus, C SW SW NW, Section 20-33-3, and was drilling at 900 feet in No. 11 Wertman, C NW SE NW, Section 20-33-3. The J. A. Hull Co. had a rig up for No. 1 Newman, NE cor. SW, Section 13-32-4, and was building a rig for No. 1, NE cor. SE, Section 23-32-4. Shawver and others were building a rig for No. 1 Jarvis, NW cor. SW, Section 35-32-5. The Gypsy Oil Co. was building a rig for No. 2 Cork, NW cor. SE, Section 13-32-4, and had made a location, No. 8 Shannon, SW cor. SE NW, Section 24-32-4. The same company's No. 6 Shannon, SE cor. NE NW, Section 24-32-4, was shut down at 1,000 feet, and No. 4 Shannon, SW cor. SE SW, Section 24-32-4, was making 15 bbls. an hour from sand at 2,960-96 feet.

Neely and the Marland Oil Co.'s No. 1 Rockwell, SW cor. NE, Section 13-32-4, was making 225 bbls. from sand at 2,530-52 feet. Boxer and others had a new location staked, No. 1 Elliott, NW cor. SE, Section 4-31-5. The S. H. E. Oil Co. had a rig up for No. 1 Elliott, SW cor. NE SE, Section 4-31-5. Roth and others had a rig up for No. 1 Coffee, NW cor. SE NE, Section 30-31-5.

Greenwood County

McGinnis & Bitler's No. 3 Teeter, C SW NE NW, Section 15-23-9, in the Teeter Pool, Greenwood County, was swabbing 250 bbls. from sand at 2,305-70 feet after being treated with a 135-quart shot. The Empire Gas & Fuel Co.'s No. 11 Teeter, C NE NE SE, Section 16-23-9, was shot with 80 quarts in sand at 2,345-88 feet, and was good for 110 bbls.

The Sinclair Oil & Gas Co.'s No. 3 Browning, C. NW NW SW, Section 20-22-10, in the Browning Pool, was shot with 10 quarts in sand at 2,253-2,313 feet, and was swabbing 300 bbls.

The Transcontinental Oil Co.'s No. 2 Nuttle, NW cor. SE, Section 2-23-9, had 2,000 feet of oil in the hole from sand at 2,348-70 feet. The Mid-Kansas Oil & Gas Co.'s No. 14 Martindale, SE cor. SW SW, Section 31-23-10, made 110 bbls. after a 220-quart shot at 2,250-2,365 feet. Roth & Faurot's No. 3 Biskitt, CSL NE NW, Section 12-25-8, was dry at 2,320 feet. Rogers and others' No. 1 Coulter, SW cor. NE NW, Section 16-25-9, was dry at 2,485 feet. The same owners' No. 8 Cartwright, NE cor. NW NW, Section 6-24-10, made 75 bbls. after a 110-quart shot in sand at 2,261-2,363 feet. The Fisher Oil Co.'s No. 1 Chamberlin, NW cor. SW SW, Section 11-33-10, was dry and abandoned at 1,390 feet. T. B. Slick's No. 1 Halroy, SW cor. NW, Section 10-34-9, was shot at 1,663-75 feet without results, and plugged back to 1,449 feet where it was making 1,000,000 feet of gas from sand at 1,439-49 feet. Simmons and others' No. 1 Ellis, NW cor. SE, Section 26-23-11, was shot with 30 and 40 quarts at 1,915-32 feet, total depth 1,952 feet, and was cleaning out.

Pryor & Lockhart had a rig on the ground for No. 3 Derbyshire, CNL NE SE, Section 13-22-10. The Derby Oil Co. and several others were building a rig for No. 2 Kipfer, SW cor. NE NE, Section 13-22-10. The Mid-Kansas Oil & Gas Co. was rigging up No. 15 Martindale, C NW NE SE, Section 31-23-10, and had a rig up for No. 16 Martindale, C NW SE SE, Section 31-23-10. The Phillips Petroleum Co. was spudding in No. 19 Lewis, C NW SE NW, Section 32-23-10. Roth & Faurot were drilling at 200 feet in No. 5 Cartwright, SE cor. NE NE, Section 1-24-9. The Skelly Oil Co. had a rig on the ground for No. 2 Teeter, C NE NW NW, Section 15-23-9. The Empire Gas & Fuel Co. was drilling at 200 feet in No. 12 Teeter, C SE SE NE, Section 16-23-9, and was building rigs for No. 13 Teeter, C SW NE SE, Section 16-23-9, and No. 14 Tetter, C NW NE SE, Section 16-23-9. Millegan and others were spudding in No. 4 Bersie, C NW NE SE, Section 22-22-11. The Skelly Oil Co. was spudding in No. 1 Jones, CNL NE, Section 6-22-12. Brice and others had staked a location for No. 1 Mosby, NE cor. NE SE, Setcion 34-23-8. Roth and others made a location for No. 1 Burk, NW cor. NE, Section 11-24-8. Rhodes and Able have located No. 1 Kirk, NW cor. Section 27-24-8. The Skelly Oil Co. was building a rig for No. 1 Hartley, SE cor. NW, Section 2-23-9.

Woodson County

The Arkansas Fuel Oil Co.'s No. 1, NW cor. SW, Section 1-24-14, in Woodson County, was spudding in. Roth & Faurot's No. 1, NW cor. SE, Section 11-25-13, was spudding in.

Greer County

Simmons and others' No. 1 Ellis, NW cor. SE, Section 26-23-11, in Greer County, was shot with 80 quarts at 1,915-32 feet, and made 35 bbls. the first 24 hours. Millegan and others were spudding in No. 4 Bersie, C NW NW SE, Section 22-

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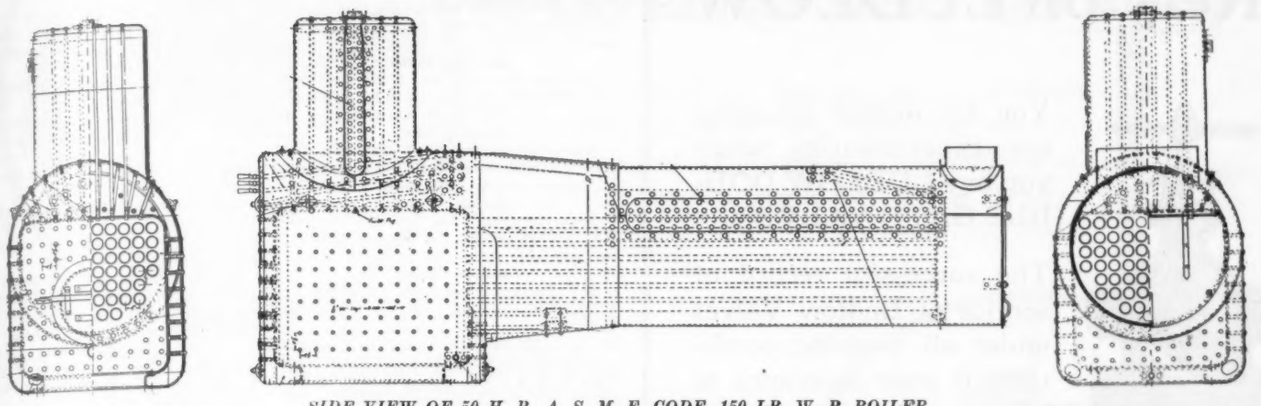

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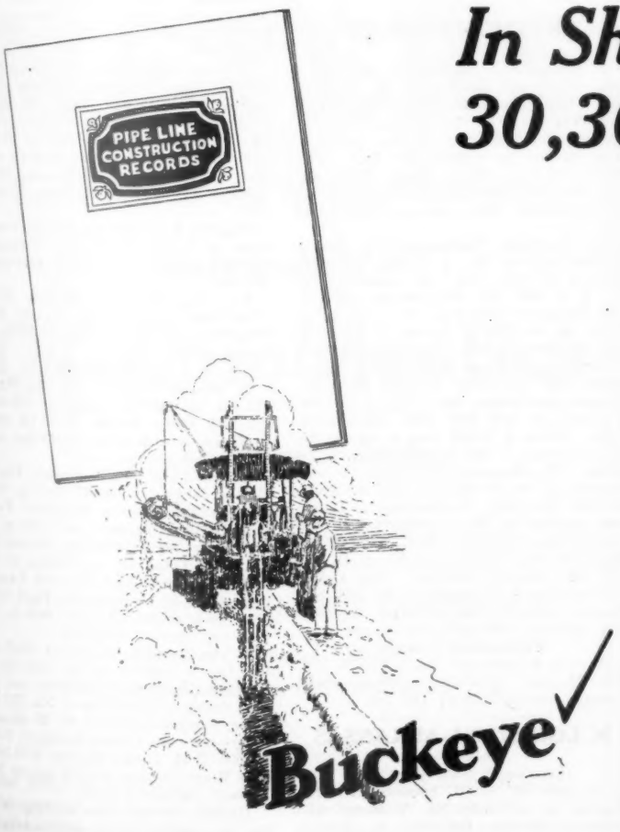

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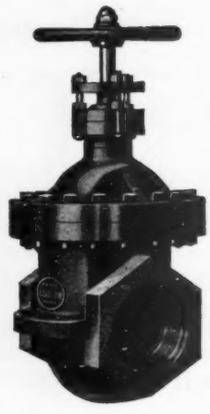

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22-11. The Skelly Oil Co. was spudding in No. 1 Jones, CNL NE, Section 6-22-12.

Sumner County

The Phillips Petroleum Co.'s No. 1, C NW NW SW, Section 29-34-2, Sumner County, was dry and abandoned at 4,001 feet. The Tidal Oil Co.'s No. 1 Milligan, NE cor. SE, Section 6-35-1, was shut down at 930 feet.

The Prairie Oil & Gas Co. had a rig on the ground for No. 1, C SE SE NW, Section 34-24-2.

Morris County

Bowman & Jones' No. 1 Welcher, SE cor. SW NW, Section 12-18-14, was dry County, was drilling at 850 feet.

Osage County

Moyer and others' No. 1 Williams, NE cor. SW SW, Section 12-18-14, was dry and abandoned at 1,420 feet.

Marion County

John Markham's No. 5, CEL NE NW NE, Section 8-22-4, in Marion County, was dry and abandoned at 2,610 feet.

Butler County

The Phillips Petroleum Co.'s No. 1 Fitch, NW cor. NE, Section 5-25-4, in Butler County, had a small showing of oil at 2,738-46 feet. Hoyt and others were fishing in No. 1 Harder, SE cor. Section 21-24-3. The Pure Oil Co. had a rig up for No. 5 Maxwell, SE cor. NE SW, Section 21-24-3. Mathews and others' No. 1 King, NE cor. NW SW, Section 17-24-4, was drilling at 600 feet.

Rice County

The Prairie Oil & Gas Co. has made a location, No. 1 Libby, NE cor. SE, Section 34-20-6w, in Rice County.

Kingman County

D. P. Flager has made a location in Kingman County, No. 1 Richardson, SW cor. SE, Section 16-27-7w.

Barton County

The Mountain States Oil Co.'s No. 1 Everleigh, SE cor. NE, Section 22-18-13w, in Barton County, was abandoned at 3,840 feet.

Comanche County

J. M. Rupard had a rig up for No. 1 Starleke, NE cor. Section 23-31-18w, in Comanche County.

Harvey County

Mason and others spudded in and shut down No. 1 Hawk, CWL SE, Section 4-23-2, in Harvey County.

OKLAHOMA FIELDS

(Continued from Page 34)

bbls. naturally from sand at 2,239-47 feet. Westheimer & Daube's No. 3 Dillard, NW cor. SE SW, Section 33-4s-2w, was completed, making 75 bbls. naturally from sands at 1,995-2,220 feet. The Skelly Oil Co.'s No. 1 Ward, CWL SE SE, Section 22-4s-2w, was good for 22 bbls. naturally from sand at 2,597-2,604 feet.

The Amerada Petroleum Corp. had a machine up for No. 4, C SE NE NW, Section 28-5s-1, and was spudding in No. 5, C SW NE NE, Section 28-5s-1. The Magnolia Petroleum Co. was building a rig for No. 1 Crowe, C SE NW SE, Section 13-8s-2. The Humble Oil & Refining Co. was spudding in No. 1 Brady, SE cor. NW, Section 22-1s-3w. Simpson and others had a rig up for No. 1 Ashton, C SW SW NW, Section 27-1-3w. Noble & Gault had a rig up for No. 2 Carson, C SE SE NE, Section 28-1s-3w. The Magnolia Petroleum Co. was rigging up No. 3 Hart, C NE SW NE, Section 32-1s-3w. Westheimer & Daube were rigging up No. 1 Hart, C SW NE NE, Section 32-1s-3w. The Cameron Refining Co. was spudding in No. 1, C NW SW SE, Section 5-3s-2w. The Coline Oil Co.'s No. 1 Ledbetter, C SE SW SE, Section 8-3s-2w, was drilling at 2,876 feet, making 4,000,000 feet of gas.

Pushmataha County

Rawson & Vosburg's No. 1, C NW NW NE, Section 10-2s-15, in Pushmataha County, was drilling at 195 feet.

N. LOUISIANA-ARKANSAS

(Continued from Page 40)

at 65 feet in No. 6, Section 23-15-17; rigging up to drill No. 7 Berry and building derrick for No. 8, Section 33-15-15.

Timberlake and others set 6-inch casing at 2,245 feet in No. 1 Green and have derricks up for No. 2 and No. 3, in Section 23-15-17; Whittaker and others are drilling in at 2,330 feet in No. 1 Green, Section 23-15-17, and Whittiken and others set 6-inch casing at 2,243 feet in No. 5 Anderson, Section 23-15-17, and rigging up to drill No. 2 Hodges, Section 26-15-17.

Sid Umsted has derrick up for No. 1 Jones, Section 26-14-17, an interesting wildcat test 6 miles north and a little west of Louann.

Columbia County, Arkansas

Most of the drilling in Columbia County is wildcatting, the Magnolia Petroleum Co. being the only interests now operating in the Stephens district. This company is drilling at 2,990 feet in No. 2 Watson, Section 36-15-20.

Arkansas Fuel Oil Co. is drilling at 1,600 feet in a test on the W. E. Hardy lease, Section 1-19-22, half way between Haynesville and Stephens.

Kentucky-Arkansas Petroleum Co. is drilling at 900 feet in No. 1 Peter Doss, Section 29-19-20, also in the territory between Haynesville and Stephens.

Nevada County

Drilling in Nevada County is nearly all in the Nevada district, with only one active wildcat test.

The Autrey Oil Co. set 6-inch casing at 1,185 feet in No. 3 Womack and has derrick up for No. 4 in Section 10-14-21.

Ames and others set 6-inch at 1,170 feet in No. 2 Womack, Section 10-14-21.

Greason and others are drilling at 1,250 feet in No. 1 McKinney, Section 10-14-21.

Smitherman-McDonald set 6-inch casing at 1,163 feet in No. 1 McKinney and rigging up to drill No. 7, in Section 10-14-21.

Zing and others are drilling at 300 feet in No. 1 McKinney, Section 10-14-21.

Bienville Parish, Louisiana

The Roxana Petroleum Corp. is drilling in broken shale, lime and chalk rock at 2,395 feet in its test on the Bryan lease, Section 30-17-6, 8 miles south of Gibsland.

Bossier Parish

In the north end of Bossier Parish, in the Springhill district, Arkansas Natural Gas Co. is drilling at 1,050 feet in No. 1 Bolinger, Section 32-23-11, and G. W. Weatherbee is drilling in lime and chalk rock at 2,275 feet in No. 1 Holland, Section 4-22-11.

In the Elm Grove district, Arkansas Natural Gas Co. set 6-inch casing at 1,875 feet in No. 4 Prince Horton, Section 30-16-11, and the Palmer Corp. is rigging up to drill Hodges B-8, in Section 25-16-12.

McClure & Ferrell are drilling at 950 feet in No. 1 Atkinson, Section 4-18-12, a wildcat test 6 miles northeast of Shreveport.

Thigpen & Herold are drilling in packed sand at 1,415 feet in No. 1 Bernstein, Section 11-20-13, 4 miles northeast of Benton.

In the Bellevue district, G. W. Weatherbee is arranging to pump Bliss & Weatherbee B-15, Section 15-19-11, completed at 355 feet.

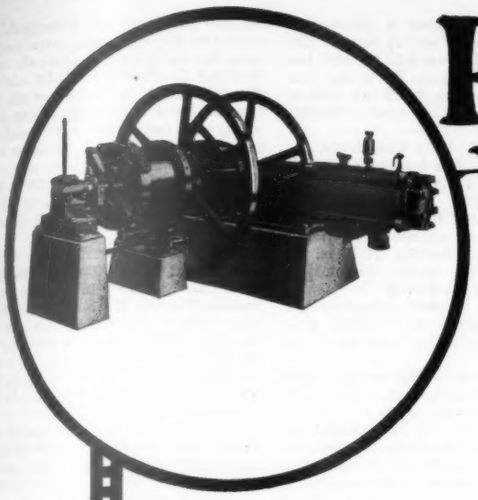
Caddo Parish

In the old Caddo Field, the Standard Oil Co. set 10-inch casing at 155 feet in No. 170 Stiles, Section 27-21-16, and W. D. Chew is drilling at 1,600 feet in No. 3 fee, same section.

In the Pine Island district, Dixie Oil Co. is drilling at 3,345 feet in No. 6 Robertshaw, Section 13-21-15; Fortune Oil is drilling in sand and rock at 3,145 feet in No. 10 Robertshaw, Section 23-21-15; The Texas Co. is drilling at 3,010 feet in No. 43 Caddo Mineral Land Co., Section 23-21-15, and the Tholl Oil Co. set 6-inch casing at 1,385 feet in No. 9 Bashara, Section 23-21-15.

In the Caddo Lake district, Gulf Refining Co. is rigging up to drill No. 220 Ferry Lake, Section 14-20-16, and set 6-inch casing at 2,040 feet in No. 221 Ferry Lake, Section 21-20-16; W. M. Gross and others have set 10-inch casing at 100 feet in No. 2 H. Rives, Section 5-20-16, and The Texas Co. has derrick up for No. 19 Russell, Section 3-20-16.

Haynes Brothers are drilling at 1,900 feet in a test on the Louisiana Live Stock & Plant Co. lease, in Section 8-19-16, 6 miles southwest of Shreveport. In the



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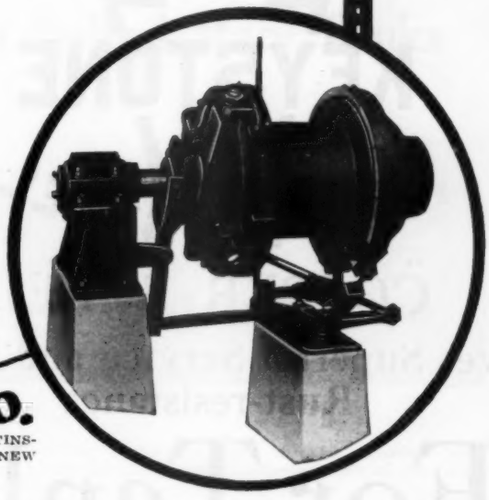

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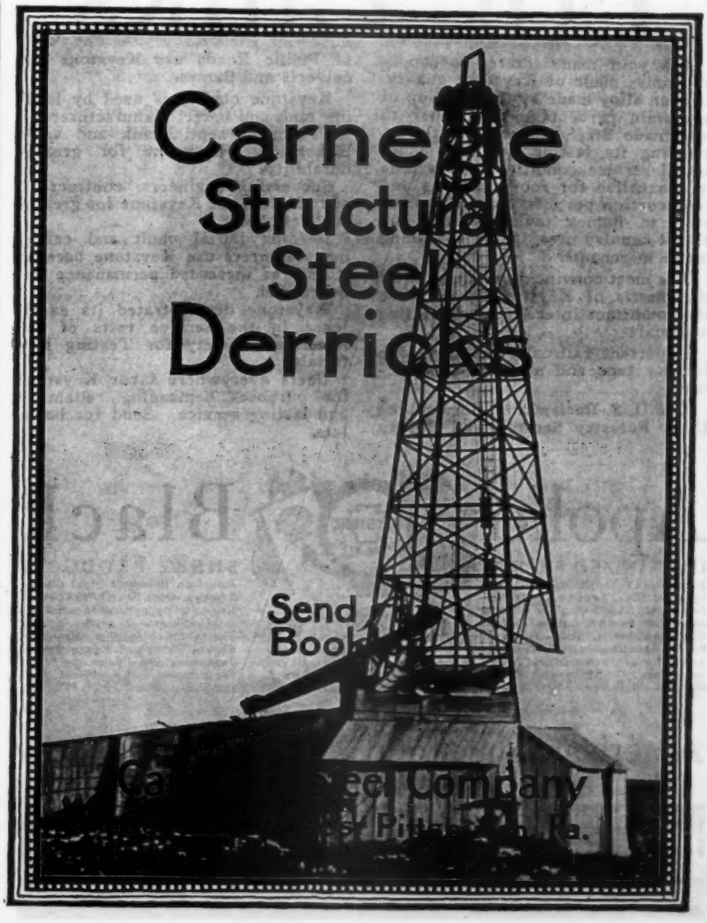

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Waskom district, Glassell & Myers are down 80 feet in their second test on the Florsheim lease, Section 9-17-16, and between Greenwood and Bethany, the Proven Production Co. set 6-inch casing at 1,917 feet in No. 1 Agurs, Section 6-16-16.

In the south end of the Elm Grove gas district, The Texas Co. has set 15½-inch casing at 21 feet in No. 3 Huron Land Co., Section 8-15-12.

Caldwell Parish

Culver and others are washing out the hole in No. 1 fee, Section 21-14-4e, at 3,131 feet, preparing to drill deeper.

Claiborne Parish

The Claiborne Lincoln Syndicate is drilling at 2,225 feet in No. 3 Fields, Section 22-19-5, 5 miles northeast of Arcadia.

Clark & Melat are drilling at 1,000 feet in No. 1 Heard, Section 5-21-6, 5 miles northeast of Homer.

El Dorado Chief Oil Co. drilled to 3,040 feet in No. 1 McElwee, Section 13-22-7, and temporarily closed down at this depth. The test is 8 miles north of Homer.

J. P. Evans and others tested salt water at 2,593 feet in No. 1 Taylor, Section 5-19-5, and will drill deeper. The test is 12 miles southeast of Homer.

De Soto Parish

The Texas Co. is drilling in chalk rock at 910 feet in No. 30 Christine, Section 6-12-11, in the east end of the old Naborton Field.

L. V. Ulrey set 6-inch casing at 2,890 feet in No. 1 Robinson, Section 22-11-12, 3 miles north of Pelican.

Grant Parish

The Grant Parish Petroleum Co. drilled to 100 feet in No. 2 Ball, Section 1-7-1w, and shut down, and is also shut down at 400 feet in No. 1 Selmer Lumber Co., Section 14-7-1w. The wells are located about 15 miles northeast of Colfax.

LaSalle Parish

In the Urania district, Gulf Refining Co. set 8½-inch casing at 1,360 feet in Urania A-1, Section 22-11-2e; Stovall Drilling Co. is drilling at 1,790 feet in No. 2 Louisiana Central Lumber Co., Section 27-10-2e, and Urania Petroleum Co. has gone into 2½ feet of gas sand in No. 5 Urania, Section 18-10-2e, and arranging to test at 1,510 feet.

Morehouse Parish

The Natural Gas Producing Co. is bailing at 2,240 feet in No. 14 Crossett, Section 19-22-5, and rigging up to drill No. 15 Crossett, in Section 20-22-5.

Ouachita Parish

Dickson & Frue are drilling at 2,570 feet in No. 1 Goodwin, Section 24-18-2e; W. C. Feazel, drilling at 1,300 feet in No. 1 Richland, Section 14-19-4e; Ladel and others at 2,025 feet in No. 32 fee, Section 10-19-5e, and Montgomery and others at 1,300 feet in No. 1 McHenry, Section 12-19-4e.

The Palmer Corp. is rigging up to drill No. 1 Central, Section 1-19-4e; Morrison and others are bailing to test at 2,168 feet in No. 1 Glazier, Section 37-19-4, and Southern Carbon Co. has a fishing job in No. 43 fee, Section 31-19-5, drilling at 1,955 feet in No. 44 and at 800 feet in No. 45, Section 7-19-5.

The Standard Carbon Co. set 8-inch casing at 890 feet in No. 1 Swart, Section 6-19-5, and J. P. White and others are drilling at 935 feet in No. 1 Jones, Section 6-16-5e.

Red River Parish

Tarver and others set 6-inch casing at 2,573 feet in No. 1 Conley, Section 2-14-10, south of Lake Bisteneau and north of the old Crichton Field.

Sabine Parish

L. M. Emlet is drilling at 1,390 feet in No. 5 Bowman Hicks Lumber Co., Section 8-7-12, 2 miles southeast of Zwalle, and the Florence Arkansas Oil Co. has derrick up for No. 1 E. A. Walker, in Section 8-5-12, 14 miles south of Zwalle.

Winn Parish

J. R. Hall is trying to set 10-inch casing to cut off a flow of fresh water at 140 feet in No. 1 E. Eagles, Section 6-10-2w, 3 miles southeast of Winnfield.

Webster Parish

In the Cotton Valley district, a lot of new work has been started by the Crusaders Pipe Line Co., the Ohio Oil Co. and the Humble Oil & Refining Co. The Ohio Oil Co. has made seven new locations on the Bodcau Lumber Co. lease in Sections 15, 28 and 28-21-10, one on the Cox in Section 15-21-10, and one on the Gray in Section 27-21-10, during the past week. It has three wells nearly completed on the Bodcau lease, is drilling at 1,750 feet in No. 1 Gray and at 2,250 feet in No. 2 in Section 27-21-10, and its No. 1 Harris, in Section 16-21-10, is standing with 800 feet of oil in the hole at 2,542 feet.

The Alabama Petroleum Co. is drilling at 300 feet in No. 1 Coffee, Section 19-21-9, and has made a location for No. 1 Robins, Section 21-21-10. The Crusaders Pipe Line Co. has nine rigs running on the Hope Estate lease, in Sections 13 and 24-21-10, and Fortuna Oil Co. is drilling at 2,510 feet in No. 2 W. Cox, Section 15-21-10, and at 2,680 feet in No. 1 Crichton, Section 19-21-9.

M. J. Derryberry has derrick up for Smith A-1, Section 29-21-10; Humble Oil & Refining Co. has two wells nearly completed on the Bodcau lease in Sections 12 and 24-21-10, bailing to test at 2,475 feet in No. 1 Gray and drilling at 2,300 feet in No. 2 Gray, Section 26-21-10, drilling at 2,445 feet in No. 3 S. S. Merritt, Section 14-21-10, and at 2,390 feet in No. 1 J. Moore, Section 34-21-10.

The Louisiana Oil Refining Corp is drilling at 2,235 feet in No. 1 Bodcau, Section 13-21-10, and at 150 feet in No. 2 Gray, Section 28-21-10, and its No. 3 Lindsay, Section 22-21-10, standing with 800 feet of oil in the hole and a little salt water.

The Palmer Corp. has derrick up for No. 2 Tillman, Section 28-21-10, and the Ruston Drilling Syndicate set 10-inch casing at 450 feet in No. 1 Cox, Section 15-21-10.

In the Springhill district, in the north end of the parish, Belchic & Laskey are bailing to test at 2,555 feet in No. 1 Martin, Section 34-23-10; the Fortuna Oil Co. is drilling in lime at 1,400 feet in No. 1 Nickerson, Section 33-23-10, and set 8-inch casing at 800 feet in No. 1 Pine Woods Lumber Co., Section 27-23-10; Louisiana Oil Refining Corp. is drilling at 2,750 feet in No. 1 Armor, Section 21-23-9, and The Texas Co. set 12½-inch casing at 205 feet in No. 1 Lewis, Section 25-23-10.

Palmer & Blount are moving in rig for a test on the Mason lease, in Section 20-18-10, between the Bellevue and Elm Grove districts.

Lafayette County, Arkansas

The Kensaw Petroleum Co. is drilling at 1,570 feet in No. 2 Red River Land Co., Section 3-20-24.

GULF COAST

(Continued from Page 46)

year brokers got scant attention from the lease departments, due to the orders to curtail expenses in all directions and this applied with the special emphasis to the Coastal regions of Texas and Louisiana. Evidently the executive officers and finance committees of the major companies have "loosened up" and as a consequence the lease departments of all the companies are more active, and what is more, they are securing acreage.

Completions and Operations

The Hull Pool supplied 10 of the total of 25 wells completed during the week, most of these being producers. The Gulf Production Co.'s No. 44 Phoenix is flowing 800 bbls. at 2,800 feet and No. 45 is good for 150 bbls. at 3,100 feet. Its No. 11 Baldwin fee is also a 150-bbl. well at 3,050 feet. The Republic Production-Houston Oil Co.'s No. 90 Dolbear was abandoned at 3,300 feet. No. 98 is flowing 310 bbls. at 2,920 feet. No. 99 is pumping 100 bbls. at 1,425 feet. The Texas Vacuum Oil Co.'s No. 4 Hannah, joint on the southwest side of the dome, will pump at 3,110 feet. The Empire Gas & Fuel Co. has a pumper in No. 16 Barrow at 3,900 feet, after deepening. The Yount-Lee Oil Co. abandoned No. 1 Stengler at 2,900 feet, after trying to work it over. The Mecom Oil Co.'s No. 6 Mecom is bailing at 4,200 feet. The Higgins Oil & Fuel Co.'s No. 5 Taylor is flowing 850 bbls. at 3,900 feet.

On the east side of the dome, the Re-

public Production-Houston Oil Co.'s joint No. 8 Dolbear is deepening from 865 feet. No. 56 is also deepening from 2,000 feet. No. 100 Dolbear is drilling at 2,845 feet and No. 101 at 1,323 feet. No. 102 is rigging. The Republic Production Co. is a J. S. Cullinan interest affiliated with the Galena-Signal Oil Co. and the American Petroleum Co. The latter is a pipe line and oil purchasing subsidiary and has finished a 6-inch line from the Hull Pool to the Galena-Signal plant on the Houston ship channel, a distance of 45 miles. The Republic Co. has nearly 50 per cent of the output of the Hull Pool and previous to January 1 it ran its oil to the Humble Oil & Refining Co. on a contract that provided for a premium of 15 cents per barrel over the posted price. The Galena-Signal plant was designed originally as a lubricating plant, but now runs light gravity crudes. It has an agreement with the Pure Oil Pipe Line Co. whereby the latter delivers Northeast Texas crude from its Huffman station to the storage of the American Petroleum Co. at Humble. The latter company has a 6-inch line from Humble to the refinery. A connecting line between the Humble storage and Huffman station has been laid.

The Humble Oil & Refining Co.'s No. 10 Guedry on the south side of the Hull Dome is deepening at 2,155 feet and No. 1 Merchant on the north side is at 3,890 feet. The Texas Co. is rigging No. 1 Hannah with a location made for No. 2. The Mecom Oil Co.'s No. 7 Mecom is drilling at 3,980 feet. The Houston Production Co.'s No. 8 Taylor is rigging with a location made for No. 9. The Eagle Point Oil Co.'s No. 2 fee is drilling around 1,435 feet.

The Gulf Production Co.'s No. 16 Hannah fee on the west side, is at 2,765 feet. On the north side of the hill, that company's No. 14 Scarborough is at 3,545 feet and No. 15 is at 2,987 feet. To the northeast it is rigging No. 20 Morris-Phillips. No. 12 Baldwin fee is rigging. On the Phoenix the Gulf's No. 14 is rigging to deepen and No. 30 is drilling deeper at 3,377 feet. No. 46 Phoenix is at 2,335 feet and No. 47 rigging to start drilling.

Orange Pool

In the Orange Pool, the Humble Oil & Refining Co.'s No. 11 Winifree was credited with 3,000 bbls. initial flow. No. 10 Chesson bailed dry. The Gulf Production Co. got salt water in Nos. 2 and 3 Chesson, workovers, at 4,625 feet and 4,425 feet respectively. It is bailing No. 1 Consolidated at 4,950 feet and No. 8 Peveto at 4,550 feet. The Sun Oil Co. is bailing No. 6 Gunstream at 4,500 feet. The Kishi Development Co. abandoned No. 5 McGuire at 3,200 feet and the American National Oil Co. No. 1 Winifree did the same at 4,675 feet. It was 1 mile northeast of production.

On Cow Bayou, the Rycade Petroleum Corp.'s No. 5-A is at 3,345 feet. No. 2-C is at 3,165 feet and No. 14-E at 4,455 feet. The Tillery Oil Co.'s No. 1 State land is at 3,985 feet. Andrews-Cameron Co.'s No. 1 State land is at 3,970 feet. On the Chesson lease, the Mutual Oil Co.'s No. 4 is cleaning out the hole. No. 7 is bailing at 4,280 feet. A location has been made for No. 14. The Humble Oil & Refining Co.'s No. 9-B Chesson is at 4,590 feet, No. 21 is below 4,700 feet. The Orange Petroleum Co.'s No. 8 Chesson is at 4,875 feet. No. 9 Winifree is idle at 3,540 feet. The Gulf Co.'s No. 4-A Chesson is fishing at 4,450 feet.

On the southeast side, the Sun Oil Co.'s No. 3 Brown, a workover, cemented casing at 4,325 feet. The Gulf Co.'s No. 17 Hager fee is at 3,508 feet. In other parts of the pool, the Brownie Babbittee Oil Co.'s No. 4 McLean is around 4,590 feet. The Edgerly Petroleum Co.'s No. 3 Carbello is at 4,510 feet. The Supreme Oil Co.'s No. 1 Jackson is deepening at 4,165 feet. The Sinclair Oil & Gas Co.'s No. 4 Granger is drilling at 3,345 feet. The Atlantic Oil Producing Co.'s No. 3 Moore is rigging to work over. The Gulf Production Co.'s No. 9 Kishi-Lang A, No. 2 M. Granger and No. 4 Hager-Moore is at 3,605 feet. Attention is called to the unusually deep tests drilling in the Orange Pool and the number.

In the new district, 3 miles south of the town of Liberty in Liberty County, Mills Bennett's No. 1 Pickett is drilling at 2,209 feet and No. 2 at 875 feet. No. 3 is rigging. Locations have been made for Nos. 1 Brown and 1 Rivere. The Hofer Oil Co.'s No. 1 Puckett is at 765 feet. The Vacuum Oil Co.'s No. 1 Bennett is at 1,123 feet. The Humble Oil & Refining Co.'s No. 1-B Rivere is at 545 feet. The company is rigging No. 1 Pickett and No. 1 Chambers. The Bashara Oil Co.'s No. 1 Pickett is at 1,235 feet with locations for Nos. 2, 3 and 4. The Oxford Oil Co.'s No. 1 Harrison is at 1,235 feet. The Monarch Oil & Refining Co.'s No. 1 Harrison is rigging with a derrick up for No. 2. Mrs. Neils Esperson has a derrick up for No. 1 Baldwin.

The Swiftsure Petroleum Co. (Bennett and associates) has started laying a 6-inch pipe line from the district to Barber Hill, where it will connect with the company's line to Cedar Bayou. The product is barged to the company's topping plant at Texas City. The distance from South Liberty to Barber Hill is 16 miles. The Gulf Pipe Line Co. is running the oil from the one well in the district. If a large pool is developed, the pipe line facilities will be easily accessible, as those of The Texas Co., Humble Pipe Line Co. and the Sun Oil Co. are all within a short distance of the locality.

Goose Creek

In the Goose Creek Pool, the Humble Oil & Refining Co. abandoned No. 59 Smith at 4,725 feet and is bailing No. 60 Smith at 4,200 feet. The Copeland Oil Co.'s No. 5 Bryan at the month of the creek, is bailing at 3,240 feet. It is a workover.

The Southern Exploration Co. is installing heavier rigs on the Wright lease to drill deeper holes for the lower sands. It has drilled three wells to 1,600-foot sand with gasoline driven rigs. Its No. 5 Wright is now drilling around 2,435 feet with a derrick standing for No. 10 and No. 9 starting. The Gulf Coast Oil Co.'s No. 31 Galliard is pulling screen to deepen from 2,880 feet. A test there found nothing. The Inca Production Co.'s No. 2 Duke is idle at 3,510 feet. The Sun Oil Co.'s No. 5 Wright is deepening at 2,300 feet. Northwest of production, the Hisgen Petroleum Co.'s No. 2 Busch is drilling below 4,435 feet.

The Humble Oil & Refining Co.'s No. 47 Smith is pulling the liner at 4,100 feet. No. 1 on Hog Island is drilling at 1,734 feet. The Gulf Production Co.'s No. 3 Paddock is rigging to sidetrack, No. 4-A Wright is starting to deepen and No. 1 Hirsch is deepening at 4,345 feet. It is on State land in the bay. No. 17 State-land Oil Co.'s sublease is drilling at 3,190 feet. No. 18 John Galliard is below 3,870 feet, with No. 15-A Tabb at 2,954 feet and 10 Tabb Fee at 2,765 feet. No. 5 Houston-Smith is around 3,230 feet.

Hardin County Pools

In the Batson district, the Gulf Production Co.'s No. 161 Wing is a 10-bbl. pumper at 650 feet. The East Batson Oil Co.'s No. 2 Texas is bailing salt water at 1,200 feet. The Acorn Oil Co. has abandoned No. 51 Paraffine at 660 feet.

The Ada Belle Oil Co.'s No. 82 Condon there is drilling at 1,140 feet. The Gulf Production Co. is rigging No. 162 Wing. The Paraffine Oil Co.'s No. 38 fee is drilling at 565 feet. Anderson & Munsen's No. 1 Hughes is deepening at 2,970 feet. It is north of the pool in a locality where efforts have been made to develop a deep sand.

In the Saratoga Pool, the Gulf Production Co.'s No. 23 BBBC is at 453 feet. The Rio Bravo Oil Co.'s No. 4 Bryant is at 2,210 feet. The Skinner Oil Co.'s No. 1 Hooks is drilling at 925 feet. Paggi Oil Co.'s No. 6 Lewis is at 956 feet. The Sun Oil Co.'s No. 58 Texas Crude sublease is drilling around 700 feet. The Regna Oil Co.'s No. 1 Petty is at 235 feet.

Other Pools

In the Spindletop Pool, the Gulf Production Co.'s No. 211 Gladys is rigging. The Williams Oil Co.'s No. 1 Gladys is drilling below 1,100 feet. The McKinney Oil Co.'s No. 1 Gladys is at 906 feet. The Stella Oil Co.'s No. 6 McFadden is at 908 feet. Ellis & Lancaster has start-

(Continued on Page 127)

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Address Box A-543, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—3,200 acres in Owensboro (Kentucky) Field; approved form lease; straight ⅛ royalty, 25 cent rental; three producing sands. Write or wire T. C. Morgan, Room 1305, 27 William Street, New York City, N. Y.

HAVE YOU CAPITAL? I have the propositions, Montana's newest and best oil and gas field—two structures, one now drilling deep test; offset and close in acreage very reasonable. Also want strong company develop new structure (can furnish plane table and reports) liberal terms. Only want first class people who want square deal, write today. R. R. Forward, Duluth, Minn.

FOR LEASE—The NE ¼ of NW ¼ of 16-14n-11e, Okmulgee County, 40 acres proven. Also 400 acres in 26-13n-25e, Sequoyah County, Okla., exceptionally good prospect. Make offer to C. P. Repetto, 7237 High St., Maplewood, Mo.

FOR SALE
Kay County, Oklahoma
Oil and gas leases, among large company's holdings
Box 214
Newkirk, Okla.

LEASES—PRODUCTION

J. F. MARION COMPANY
Magnolia Building
Dallas, Texas
Buys and Sells
Texas Royalties
"Ask Us First"

NORTH TEXAS

Shallow field leases, including offsets, at low prices. Offsets to producing leases in Archer County have sold as high as $900 cash per acre. Chance for excellent profits. Write for maps and prices. P. R. MacIntosh, 215 Neil P. Anderson Bldg., Fort Worth. Tex.

LINCOLN COUNTY oil and gas leases for sale; $2.50 per acre; SE quarter of NE quarter of Section 5, 40 acres; N half of SE quarter of Section 18-16-2e, 80 acres. Write S. M. Vandeventer, Merrick, Okla.

LEASES—PRODUCTION

FOR SALE CHEAP—80 acres Chaves County, N. Mex., eight miles from Ill. No. 5. Sell outright or royalties. This is a first class farming proposition as well as the oil. For particulars address Bob White, 11 N. Boeke. Kansas City, Kans.

FOR SALE or development, close in to production, leases Russell County, Kansas Pool; royalties close in Cromwell Pool, Oklahoma. Address Ben Gurley, Salina, Kans.

EXCEPTIONAL OPPORTUNITY

Account owner's serious injury he is compelled to sell one-sixteenth interest in well now drilling at seventeen hundred feet and with two good showings already, and six hundred forty acres leased close by. Location on excellent structure, and map furnished on request. Well in Ellis County, Kansas. Also have fine drilling blocks on wonderful structures. Write or wire W. J. Madden, Hays, Kans.

FOR SALE—10,000-acre lease in Allen and Monroe Counties, near Sulphur Creek, some in Clay County, Tennessee; ⅛ royalty, cheap rental, due in 1-2 years; shallow drilling; price 25c to 75c per acre. William S. Silvers, Marion, Ind.

January 21

The Oil and Gas Journal
Tulsa, Okla.

Gentlemen:

Enclosed please find check for renewal of our advertisement in your Journal.

As to advertising in your Journal, will say, that upon receipt of your first card soliciting our patronage, we decided to insert a $4.50 ad for one month, thinking at the time that we would try it just to be trying, and little realizing the real value of your Journal as an advertising medium, for, to our astonishment and surprise, we received one of the best orders we have ever received, through this small and inexpensive ad.

Hoping to be a continuous advertiser and awaiting the issue of the Annual Review, we are,

Yours very truly,
D. WOLFF & SONS,
A. Wolff (Signed)

AW:MR

LOGAN COUNTY is getting good play by big companies. Get in ahead of production. Oil leases and royalties priced cheap. Box 366. Guthrie, Okla.

ROYALTY—Creek County; $2,000 buys ½ of 60 acre adjoining production in Stroud Field. Box 366, Guthrie, Okla.

PRODUCTION—10 bbls.; shallow; near railroad station; map. H. D. Ahrens, Paola, Kans.

SOUTHEAST NEW MEXICO

Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.
H. T. ORCUTT
816 Colcord Bldg. Oklahoma City, Okla.

FOR SALE—323-acre lease Hamilton Dome, Moffat County, Colorado near discovery well. Box 1905, Los Angeles, Calif.

BALCONES FAULT Royalty near Powell, offset well now 2,000 feet. Also drilling proposition rigged ready to go. Frank Poorman, 3215½ Ross Ave., Dallas, Tex.

FOR SALE—Cowley County, Kansas, 80-acre lease one mile drilling well on approved structure, in line of production. Perfect title, $15.00 per acre. Owner, 503 East 13th St., Phone 1216 W., Winfield, Kans.

ROYALTY
"Buy from the owner"

Owner will sell one-half perpetual royalty on lands located in active territory, between two drilling wells. Twenty acres or more price $2.50 per acre. Terms if desired. Address "Owner," P. O. Box 1036, Fort Worth, Texas.

THERE IS MORE Pennsylvania formation in Brewster County than in any county in Texas, we have one hundred thousand acres for sale or lease to suit. John Young, Alpine, Tex.

OIL LEASE—827 acres, five-year 88 form Live Oak County, Texas. Close to production. Drilling on three sides on structure. Price for quick sale $5.00 per acre. For map and full particulars address Gulf Leasing Co., 525 Brady Bldg., San Antonio, Tex.

LEASES—PRODUCTION

LEASES and royalties in Ouachita County, Arkansas, from $5 per acre up. P. B. Orr, P. O. Box 303, Camden, Ark.

GARFIELD COUNTY, OKLAHOMA
Leases, Drilling Contracts
P. O. Box 156
Enid, Okla.

METCALF COUNTY oil leases, vicinity production; from 50 cents to $5 per acre, which pays rental for one year. Will advance in value as drilling goes on. Box 184, Edmonton, Ky.

80-ACRE LEASE—Wagoner, Oklahoma, with three shallow wells, engine and other equipment. $3,500 cash, Box 438, Monmouth, Ill.

ACREAGE in Bazette area—the next Balcones pool—to let on drilling proposition; also one location in Wortham Townsite in trend of development—will give 10-16 in property for well. Stumpf & Steffey, Box 486. Wortham, Texas.

INVEST TODAY in Pomona, the new Townsite on the Missouri Pacific R. R. surrounded by drilling oil wells; two wells to be drilled on townsite; a lot or acre tract with oil and gas rights (fee simple) may make you a fortune. You get a warranty deed and when oil or gas is hot you can lease your land at a big price. Fortunes were made in dozens of towns when oil was hit. Write for map and information. Business lots $150.00; acre tracts 200x220, price $200.00. This is real estate and you own the land. Write for map.
POMONA TOWNSITE COMPANY
Monticello, Ark.

OIL AND GAS LEASES
On Marathon Fold

18,000 acres, University permits, dated October 1, 1924, joining University permits of Sun Oil Co. and Gulf Production Co. Transcontinental now drilling and three more wells to start. Price reasonable.

20,000 acres 10-year leases, Crockett County; large and small blocks adjoining best companies.

5,000 acres, 10-year leases; close to drilling wells; Upton County.

1,920 acres University permits, Reagan County; close to Big Lake Oil Co., and Texon Oil & Land Co. producing wells. Want drilling contract.

133,000 acres Pecos County, near blocks of Arkansas Fuel and Pittsburgh operators. Low in price. Will sell in blocks or arrange for wells. Will allow time for geological inspection.

3,000 acres 10-year lease. Upton County; near drilling well and joining leading company holdings. Prices and maps on request.
C. W. WEBSTER
17th Floor W. T. Waggoner Bldg.
Fort Worth, Texas
Reference: R. G. Dun & Co.

40 ACRES of land. $125. Good title. Franklin County, Arkansas. J. Schoenborn. 2421 High St., Chicago, Ill.

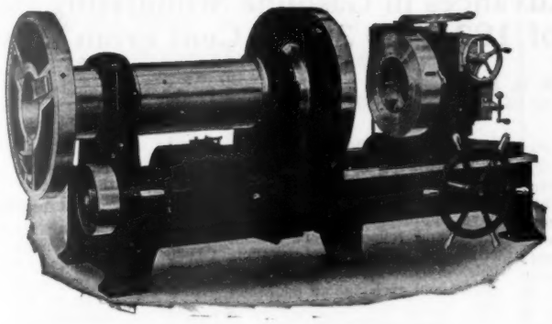
FOR SALE or development on working interest, lease close to production, Union County, Arkansas. Semi-proven. Ben Gurley, Salina, Kans.

FOR SALE—EQUIPMENT

BESSEMER Gas Engines, 15- to 105-h.p.; other makes 300-h.p. Oil and gas and steam engines, compressors, generators; complete gasoline plants. R. W. Russell, St. Marys, W. Va.

FOR SALE—30 miles 3-inch pipe line, 20 miles 2-inch pipe line. Acme Foundry & Machine Company, Coffeyville, Kans.

FOR SALE—28 Star drill at Jonesburg, Kansas. Box 36, Florence, Colo.



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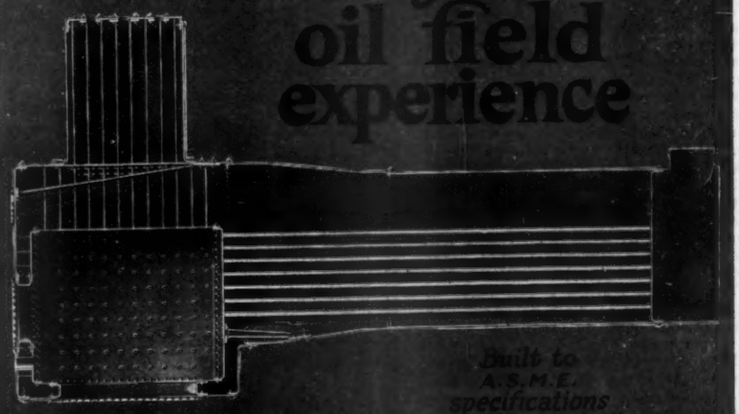

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Oil Securities Continue to Advance

Buying Increases in Volume, Advances in Gasoline Stimulating Investment. Now Above Peak of 1924; Up 30 Per Cent From Low

By N. O. Fanning
Room 543, No. 30 Church St., New York

NEW YORK, Feb. 7.—Oil securities continued their advance during the past week, making new high records for the year. Buying was stimulated by additional price advances and further decreases in crude oil production.

Buying of oil stocks, which began on a large scale at the turn of the year, partly due to switching of trades from other classes of stocks, has steadily increased in volume, indicating that at present public buying of oil securities is on a large scale. Advances of 6 cents per gallon in gasoline in some sections of the East and proportionate gains elsewhere have whetted the public appetite for oils.

Preliminary figures of today's trading on the New York Stock Exchange and on the Curb give an indication of the remarkable trading in oil stocks:

Stock—	No. Shares Dealt In
Standard of New Jersey, common	20,200
Pacific Oil	13,000
Marland Oil	42,500
Sinclair Consolidated, common	16,600
Independent Oil & Gas	30,600
Pan American Petroleum "B"	61,500
Texas Pacific Coal & Oil	54,500
International Petroleum, Limited	34,300
Standard of Indiana	16,900

These figures are representative of the amount of trading in oil stocks during the last few days.

Advance of Average

Since January 1, 1925, The Oil and Gas Journal's weekly average price of 20 representative oil stocks listed on the New York stock Exchange has advanced approximately 8 points, or about 15.7 per cent. On February 2 the average reached 59.24, against 51.73 the last week of December.

At approximately 60 the average is about 2½ points higher than the peak for 1924 of 57.46 on February 5, or almost exactly one year ago. The peak of the average in 1923 was 62.17, almost two years ago, or on March 6. In both of the preceding years the highest prices for oil stocks were established during the first three months. So far this year they have paralleled 1924 and 1923 in swinging up, but it remains to be seen whether a reaction will set in during the Spring of 1925. The history of preceding years is not particularly significant in view of the changed situation in the oil business brought about by steadily increasing consumption and a tendency toward lower production.

The average reached a low point of 45.24 on October 11, 1924. The advance since then amounts to exactly 14 points or 30 per cent.

Many believe that if crude oil prices rise to the extent now predicted, that is, say, an additional $2 per barrel, oil securities will reach new high levels bringing the average to a new high for all time. This, however, depends on the course of production.

Pan American Strong

Pan American Petroleum & Transport B stock was particularly active and strong, advancing to 76. It sold repeatedly above the ordinary stock for the first time in many months. The "B" stock is nonvoting, but receives the same dividends as the common stock.

An interesting feature of the market was the sale of 10 shares of Mexican Petroleum stock at 225. More than 90 per cent of the capital stock of Mexican Petroleum Co. is now in the treasury of Pan American Petroleum & Transport, holders of Mexican Petroleum common receiving Pan American "B" stock in exchange.

Pan American has undergone a considerable change since 1920. At that time its interest in Mexican Petroleum was one of its chief assets. Now, however, it has developed a domestic organization of magnitude outside of its holdings in Mexico. Pan American's big oil tanker fleet, flying the American flag, is one of its most valuable assets, backing up its domestic, foreign and export activities.

California Oils Higher

The advance in prices in California was reflected in the strength of Union Oil Co. of California stock, as well as that of Pacific Oil, Associated Oil and California Petroleum. Standard of California hung back somewhat, despite the fact that it has a substantial interest in Pacific Oil in addition to huge properties of its own. General Petroleum was another feature of the California oil group reaching 52. The company is said to have approximately 15,000,000 bbls. of crude and refined oil in storage and a production of its own averaging 25,000 bbls. daily. It is receiving from purchases and exchange an additional 40,000 bbls. daily, and running through refineries about 50,000 bbls. daily.

Southern Pipe Line

The Southern Pipe Line Co. reports for 1924 profits of $280,092, equivalent to $2.80 per share earned on $10,000,000 capital stock, compared with $547,707, or $5.47 per share in 1923.

Eureka Pipe Line

The Eureka Pipe Line Co. for the year ended December 31, 1924, reported profits of $32,061, equivalent to 64 cents per share on the $5,000,000 capital stock, compared with $324,507, or $6.49 per share in 1923.

American Republics

American Republics Corp. reports for the year ended December 31, 1924 net income of $2,648,688 after charges, equal after preferred dividends to $9.74 per share on the 200,000 no par value shares of common outstanding.

Humble Pipe Line

At the annual meeting of the stockholders and directors of the Humble Pipe Line Co. the following were elected directors: R. V. Hanraban, W. S. Pillow, W. M. Cleaves, John C. Townes, Jr., F. F. Mallott, J. A. Neath. The following officers were elected: R. V. Hanraban, president; W. S. Pillow, vice president and treasurer; R. S. Burdick, secretary and assistant treasurer; C. D. Voss, assistant secretary. The stockholders voted to increase the capital stock from $12,000,000 to $24,000,000, necessitated by the need for financing extension of the company's facilities into Reagan County and other sections of Texas.

Independent Oil & Gas

At the annual meeting of the Independent Oil & Gas Co. in Okmulgee, Okla. Monday, E. H. Moore was reelected president by the directors. J. W. McCullough of Okmulgee, first vice president; W. S. Bouvier of New York, second vice president; R. M. Riggins, treasurer; W. H. James, secretary and counsel. Other directors include W. C. Durant of the Durant Motors Co., Detroit, Mich.; R. B. Barlow, purchasing agent; E. W. Burns, field superintendent and A. W. Dustin, chief geologist.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

No.	Stock—	Par	§Dividend Rate	Clos. Quotations Feb. 9	Feb. 2	1924 High	1924 Low	1923 High	1923 Low
1.	American Republics	..	..	*60	63	48	25	..	..
2.	Associated Oil	25	6	37¼	39	34⅝	27⅝	29¼	29½
3.	Atlantic Ref. com.	100	..	114⅜	116	140½	78½	160	98¾
4.	Barnsdall "A"	25	..	27½	26½	22¼	14	35	9⅞
5.	California Pet. com.	25	7	28½	28½	29	19⅞	28½	17½
6.	Cosden & Co. com.	..	..	33½	35¼	40¼	22⅝	62¼	23¾
7.	Gen. Am. Tank	..	†3	54	*55	53	35½	71⅝	40
8.	General Asphalt	100	..	58¼	59½	63⅝	31⅞	64	23
9.	General Petroleum	25	8	50⅜	48⅞	45	38⅝	..	..
10.	Houston Oil	100	..	82½	82⅞	82½	61	78	40⅜
11.	Independent Oil & Gas	..	..	26½	24⅜	16⅓	5⅜	11¼	3⅜
12.	Indian Refining	10	..	8½	8⅝	7	3⅜	8½	4
13.	Louisiana Oil	50	..	22	23⅛	..	..	..	..
14.	Maracaibo	..	..	32	34⅞	37½	26⅝	28¼	16
15.	Marland	..	..	44	45⅝	42	29	59⅝	18½
16.	Mexican Seaboard	..	..	16⅝	17	25⅜	14½	19⅜	5⅜
17.	National Supply	50	6	67	69	72½	54	68	54
18.	Pacific Oil	50	†2	63	64½	58¾	45	52⅛	31½
19.	Pan American com.	20	16	73⅞	72⅝	65	44¼	53⅛	53
20.	Phillips Petroleum	..	†2	43⅞	45⅝	42¼	28½	59⅝	19¾
21.	Producers & Refiners	50	..	30½	32½	43½	29¾	68¼	17½
22.	Pure Oil com.	25	6	32¼	33¼	30¼	20	32	16¼
23.	Royal Dutch, N. Y. sh.	13.40	2.62	55½	56⅝	59½	40⅜	56⅛	40½
24.	Shell Transport	10	92½	*43	44½	42	33	41¼	29½
25.	Shell Union com.	..	†1	27	28	22½	15⅜	19¼	12⅝
26.	Simms Petroleum	10	..	22⅝	23⅝	24	10⅜	16¾	6½
27.	Sinclair Cons. com.	..	..	22⅝	24⅛	27⅛	15	39⅝	16
28.	Skelly Oil	25	..	29½	30⅝	29	17½	35	12⅛
29.	Standard of California	25	8	69⅜	67⅛	68½	55½	64½	47½
30.	Standard of N. J. com.	25	4	45	47¼	42¼	33	44¼	30⅜
31.	Standard of N. J. pfd.	100	7	*117	116⅞	118⅝	115⅝	118¼	114¾
32.	Superior Oil	6	..	6⅛	6⅝	8⅛	2⅝	6¾	2
33.	The Texas Co.	25	12	41½	48⅞	45⅝	37⅜	52⅞	34⅜
34.	Texas Pac. Coal & Oil	10	..	21¼	18½	15¼	8¼	24⅝	5½
35.	Tide Water Oil	100	4	144⅛	114½	151	116¼	144	94
36.	Transcontinental	..	..	5	5	6¼	3⅜	14½	1¼
37.	Union Oil of Cal.	25	7.2	41½	42½	39	35½	..	..
38.	Union Tank com.	100	6	*120	122	132⅞	94	114	106
39.	White Eagle Oil & Ref.	..	2½	30½	31½	29⅝	23⅛	30⅜	20½
	Standard Oil Stocks								
40.	Anglo-American Oil	£1	25	20	19½	18¾	14⅜	19¾	13½
41.	Borne Scrymser	100	12	*230	235	264	150	153	110
42.	Buckeye Pipe Line	50	14	67	69	85½	61	94	57½
43.	Chesebrough Mfg. Co.	25	14	63½	52½	52½	29¼	340	205
44.	Crescent Pipe Line	25	..	*14	15⅝	20	11¼	25	15
45.	Cumberland P. L.	100	10	137	148	148	109	117	80
46.	Eureka Pipe Line	100	8	*84	94	105	74	117¼	87
47.	Galena Signal com.	100	4	64	64	69¾	52⅛	78	55
48.	Humble Oil & Ref.	25	4.8	46⅝	46½	43⅜	36	41	28¼
49.	Illinois Pipe Line	100	12	146	149½	161	123	171	115
50.	Imperial Oil Ltd.	25	12	126½	134½	119	99	123	92
51.	Indiana Pipe Line	50	8	*77	83	100	66	103	81
52.	International Pet. Co.	100	x50	27⅛	27½	24¾	16⅞	24⅜	13¼
53.	Magnolia Pet. Co.	100	4.5	154½	158	162	124	166	123
54.	National Transit	12.50	16	23½	25	25⅞	20⅝	29	19½
55.	New York Transit	100	10	71	73	97	54½	138	70
56.	Northern Pipe Line	100	6	*84	88	107½	72	111	96
57.	Ohio Oil Co.	25	8	73	74¾	79½	53	85¾	48¾
58.	Penn-Mex Fuel	25	..	40	39⅞	45⅝	27	45	10½
59.	Prairie Oil & Gas	100	8	245½	258¼	269	193	272	152
60.	Prairie Pipe Line	100	8	120	123	111	100	117	93
61.	Solar Refining Co.	100	15	230½	247	240	170	212	161
62.	South Penn Oil	100	..	182½	188	176	117	196	100
63.	South West Pa. Line	100	4	*80	83	89	68	89	66
64.	Southern Pipe Line	100	8	87	97	100	80½	116	87
65.	Standard of Indiana	25	10	67⅝	69⅞	69⅜	54¼	69⅞	48½
66.	Standard of Kansas	25	..	41½	45⅝	50½	32½	56¼	36½
67.	Standard of Kentucky	25	16	120¾	126	121⅛	101	109½	76
68.	Standard of Nebraska	100	30	260	262	262	198	280	186
69.	Standard of New York	25	5.6	46¼	48½	48	37¾	49⅜	35½
70.	Standard of Ohio com.	100	10	354	361	377½	277	320	270
71.	Swan & Finch com.	25	..	*24½	26	28	20	..	..
72.	Vacuum Oil	25	†3.75	89¼	95¾	83¼	56½	55½	40
73.	Washington Oil	10	..	*20	29	29	25	28	20½
	Miscellaneous Stocks								
74.	Cities Service bks. sh.	..	†21	21¼	19⅝	19	13¼	18⅛	12¾
75.	Gulf Oil Corp. of Pa.	25	6	68⅜	70½	67⅜	56	68¼	45⅜

*Bid, no sales. †In dollars. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Feb. 9	58.39	Jan. 5	53.01	Dec. 1	49.59		
Feb. 2	59.24	Dec. 29	51.73	Nov. 24	50.23		
Jan. 26	56.09	Dec. 22	50.76	Nov. 17	50.07		
Jan. 19	54.58	Dec. 15	50.36	Nov. 10	51.86		
Jan. 12	55.28	Dec. 8	49.49	Nov. 3	48.16		

CONGRESS TO BEGIN GASOLINE PRICE QUIZ

WASHINGTON, D. C., Feb. 9.—Acting Chairman F. N. Zihlman of the District of Columbia Committee of the National House of Representatives, has announced he will call in officials of the Standard, Texas and other National concerns, to explain gasoline price increases in Washington. These have totaled 5 cents a gallon in the last two weeks.

GEORGE F. BRIGHAM DIES

George F. Brigham, president of the Commerce Petroleum Co. and manager of the southwestern office of the North American Car Co., died at his home in Tulsa early Sunday morning. He was 62 years old. Funeral services were held Monday from the Trinity Episcopal Church and the body was taken to Sharon, Wis., for interment. Mr. Brigham was born in Fredonia, N. Y., January 12, 1863. He opened the St. Louis office of the Chicago Northwestern Railroad in 1894 and was with that road for 25 years. He came to Tulsa in 1919. Besides his widow, Mr. Brigham is survived by two sons, Godfrey MacDonald Brigham of Tulsa, and James W. Brigham of St. Louis; a daughter, Mrs. M. H. Tuttle of Denver, Colo.; a brother, Henry H. Brigham of Chicago; and a sister, Mrs. Fannie Arnold of Sharon, Wis.

PIPE LINE TO ARTESIA FIELD

The Gilliland Oil Co. of New Mexico, which has a 500-bbl. refinery in Roswell, N. M., will lay a 13-mile pipe line from the town of Globe, N. M., to the Artesia Field to supply its refinery. The refinery will market its products in the local field.

Under the Hood Lies Another Sale

Our Seamless Sample Oil Bottles of clear flint glass, with ground and polished bottoms are producing worth while results for numerous refiners.

Available in 2 oz., 4 oz., and 8 oz. sizes, they can be supplied with extra-long, high-grade, corks tapered to fit exactly.

LUBRICATING oils displayed in "Diamond I" Quart Oil Dispensing Jars cause many motorists who drive into the Filling Station for gas to drive out with oil also.

These clear transparent containers filled with oil catch the eye and uncover many extra sales that lie beneath the hood.

In addition to the stock jar, illustrated above, which fits any of the standard spouts on the market, we are also supplying a number of manufacturers with lettered containers in special designs.

The next time you are ordering Quart Oil Dispensing Jars be sure the "Diamond I" is on the bottom. This mark is a guarantee of accurate capacity, greater strength and definite blown-in-the-bottle quality.

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Gear Greases
Gear Lubricants
Axle Greases
Wire Rope Lubricants
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REFINING AND MARKETING

REFINING INDUSTRY IN KENTUCKY NOW DRAWING OIL FROM LOUISIANA

By Vern T. Whitney

LOUISVILLE, Ky., Feb. 9.—Back in the early days when the term "gasoline" meant something over 68 degrees gravity and refiners were trying to crowd everything into kerosene, as kerosene prices were more than twice the price of gasoline, the oil business in Kentucky was handled by the Chess-Carley Co. which later became the Standard Oil Co. of Kentucky.

At that time there were no refineries in Kentucky although crude oil had been discovered in Kentucky down in Cumberland County. Shortly after that the oil pools of Wayne County were brought in and a loading rack was established at Somerset, Ky., and that is how the name Somerset crude was given to Kentucky crude and Kentucky crude is now classed as Somerset practically over the entire State.

Kentucky has the oldest independent oil company in the south which is still in operation and that is the Stoll Oil Refining Co., of Louisville, established in 1896 by C. C. Stoll, who is now president of the Stoll Oil Refining Co., and who has probably served the greatest number of years as a Kentucky oil man having been with the Standard Oil Co. for 15 years previous and while with the Standard Oil was in charge of the refined oil work and established stations in the Southern States where the Standard Oil Co. of Kentucky is now doing business.

The Stoll Oil Refining Co. now does business throughout the State of Kentucky and in Cincinnati, Ohio, and in southern Indiana and has a lubricating oil plant in Louisville that handles Eastern oils and makes a full line of automobile oils having a wax plant and a cold settling plant. This company, however, has not put in a cracking plant as most modern refineries have, and still sells the old time straight run gasoline that is rapidly becoming an unknown product in view of the fact that most refineries are putting in cracking plants which are much more profitable to run, and which make very good commercial gasoline.

Just as the Stoll Oil Refining Co. is the oldest independent oil company in the South the Louisville Petroleum Refining Co., of Louisville, Ky., is the newest arrival and plans to have its plant operating by March 1, using the Dubbs process and operating on fuel oil and the lower priced Louisiana crudes that can be so profitably cracked into gasoline by the Dubbs process.

Louisville also is the home of two other modern refineries. One is the Aetna Refining Co., using the Fleming Cracking Process and the other, the Riverside refinery of the Standard Oil Co. of Kentucky, using the Burton process. A. K. Whitelaw is manager of this plant and is one of the best known oil men in the State. Louisville is the home office of the Standard Oil Co. of Kentucky for the five Southern States and it has been stated that over 50 per cent of the stock of the Standard Oil Co. of Kentucky, operating in Georgia, Alabama, Mississippi, Florida and Kentucky is owned by the citizens of Louisville. The Standard Oil has more filling stations than any other company in the Louisville district. There are quite a large number of other companies doing business as jobbers in Louisville, the largest being the Gulf Refining Co. and the next largest the Indian Refining Co. and there are some half dozen independent jobbers.

Kentucky is known as one of the oil States and most of the oil produced here is handled by the Cumberland Pipe Line Co. and is moved to Eastern refineries. However, there are quite a number of other smaller pipe lines owned by such companies as the Indian Refining Co., Great Southern Oil & Refining Co., Petroleum Refining Co., Petroleum Purchasing Co., Paragon Refining Co., and the Stoll Oil Refining Co., who maintain gathering lines for their own refineries.

Kentucky also has a number of refineries located out in the State, the chief among these being the Great Southern Refining Co., at Pryse, Ky., the Petroleum Refining Co. at Latonia, Ky., the Ashland Refining Co. at Catlettsburg, Ky., the Riggs Refinery and the Central Producing & Refining Co. at Bowling Green, Ky., and the Inter-Cities Oil Co. at Scottsville, Ky.

Kentucky production is on the decline rather than on the increase and there is hardly enough crude oil produced here at this time to take care of the various refiners so that some of the plants are bringing in crude oil from Louisiana territory.

BRECKENRIDGE PLANTS PURCHASED BY HUMBLE

The Humble Oil & Refining Co. has purchased the two gasoline absorption plants of the Westova Oil & Gas Co. at Breckenridge, Texas. The new owners took over the operation of the plants during the past week. The plants, which are operated together, are now producing approximately 30,000 gallons of absorption gasoline a day, with a capacity in excess of the present output which is said to be the second largest in the Breckenridge area.

The plants were constructed by the Hope Engineering & Supply Co., which is owned by the same interests that control the Westova Oil & Gas Co. The output of the two plants has been marketed by the Bell Oil & Gas Co. of Tulsa. The new owners will handle the output in the future.

CAPITAL CHANGES

OKLAHOMA CITY, Okla., Feb. 9.—The Champlin Refining Co. of Enid, a Maine corporation, has filed notice with the Secretary of State of an increase of capital investment in Oklahoma from $2,500,000 to $3,339,284.83. The Papoose Oil Co. of Delaware has increased its capital investment from $500,000 to $565,780. A permit to do business in Oklahoma has been granted to the Trinidad Royalties Co. of Colorado, which reports a capital investment here of $20,000. A permit has been granted also to the Mazda Oil Corp. of Delaware, headquarters in Tulsa, capital investment $5,000. Charters were issued recently to the Newkirk Refining Co. of Newkirk, capital stock $300,000, incorporators C. N. Atkinson and others, and the High Test Oil Corp. of Oklahoma City, capital stock $25,000, incorporators Robert M. Rainey and others.

MINNESOTA OIL MEN MEET

CHICAGO, Feb. 7.—There was an informal meeting of St. Paul and Minneapolis oil men at the New Nicolet Hotel recently, at which 114 were present. C. L. Maguire of the Northland Oil Co., made an address on furnace oil, which was the chief feature.

WISCONSIN JOBBERS TO MEET

The monthly meeting of the Wisconsin Independent Oil Jobbers will be held at Hotel Lorraine, Madison, Wis., on February 18.

N. P. M. A. PLANNING CONFERENCE IN APRIL

CHICAGO, Feb. 6.—An "Industrial Conference" is the name given to the meeting which will be held by the National Petroleum Marketers Association on April 7, 8 and 9 at the Congress Hotel in Chicago.

Plans are being made to include in the program at least one meeting each day in which prominent industrial leaders will present papers dealing with the problems confronting members of the association. In addition, a great deal of time and attention will be given to conferences between the executive officers of the various State associations, according to the tentative plans announced by L. V. Nicholas, president of the association.

The general meeting will be held in the Florentine room and a limited number of exhibits will be placed in the Gold room. Space will be provided for a limited number of exhibits.

OIL SALESMEN IN CONVENTION

BINGHAMTON, N. Y., Feb. 7.—One of the largest conventions of salesmen in the oil industry in this section was held here recently. There were 210 present, mainly salesmen for the Heath Oil Co. of New York. The meeting was in charge of Sales Manager Marshall.

INDIANA OIL LAW TEST

WASHINGTON, D. C., Feb. 7.—An appeal of the Indiana Refining Co., which sought to challenge the constitutionality of the Indiana petroleum and inspection law, has been dismissed by the Supreme Court, on the ground that no Federal question was presented.

NEW REFINERY IN MEXICO

The Huasteca Oil Co. is planning a large refinery in Mexico. It also has requested permission to extend its drilling zones, and new machinery has been ordered from the United States.

IN NEW POST

E. R. Lederer, vice president of the Louisiana Oil Refining Corp., Shreveport, La., has resigned, effective March 1. On that date Mr. Lederer will become vice president of the Texas Pacific Coal & Oil Co., with headquarters in Fort Worth, Texas. He will have charge of refineries and natural gasoline plants.

BULK STORAGE ON DELAWARE

Crew Levick Co., a petroleum marketing subsidiary of Cities Service Co., is letting contracts for the erection of gasoline and lubricating bulk storage on its Petty Island property on the Delaware River.

RUMORS OF NEW COSDEN FIRM

Rumors have been in circulation since the announced change of the name of Cosden & Co. to the Mid-Continent Petroleum Corp., that J. S. Cosden is about to reenter the oil business through the organization of a new company. Mr. Cosden, according to the information current in the New York financial district, will be associated with New York bankers and will consolidate five Mid-Continent companies into one new organization. The companies mentioned in the report were the Berry Petroleum Corp., the Hope Petroleum Corp., the Moore Refining Co., the Burke-Greis Oil Co. and the Burke-Hoffeld Oil Co. A small interest in the Atlantic Petroleum Corp., it was also reported, will form the nucleus of J. S. Cosden Co., the new organization.

TONKAWA PRICE ADVANCED

The Bolene Refining Co. and Champlin Refining Co. posted increases of 10 cents each in their prices for Tonkawa, Okla. crude, making the new price $2.10, effective February 7. This represents a 10-cent increase over the prices for top gravity crude posted by the major purchasing companies.

PROGRAM FOR GROUP SESSIONS REFINERS' CONVENTION ANNOUNCED

F. L. Miller, vice president of the Miller Petroleum Co., Kansas City, Mo., and M. D. Creel, credit manager of the Marland Refining Co., Ponca City, Okla., will deliver the principal addresses at the joint meeting of refinery credit and sales managers to be held the opening day of the Annual Convention of the Western Petroleum Refiners Association, March 3, 4 and 5. Mr. Miller, who has charge of sales for his company which operates two refiners in the Mid-Continent Field, will speak on the subject "Relation Between Sales and Credit Departments." Mr. Creel, who handles for one of the largest refineries of Oklahoma, will discuss "The Problem of Credits."

Howard Bennette, managing director of the association, also announced the program for the group session of traffic men to be held the morning of the opening day. This completes the group programs of the convention, that of the plant operators, which is to be held the second day, having been announced last week. The five subjects which will be discussed at the meeting of traffic men are as follows:

1. Allowances of claims for outages.
2. Protest filed by the association requesting suspension of Leland's Tariff, No. 79-G.
3. Discussion of proposed complaint attacking petroleum rates from Oklahoma to Texas.
4. Proposed readjustment of rates to Southeastern Territory. What part should association take in this matter involving substantial increases in rates and which carriers claim are necessary to clear four section violation.
5. The association protested amendment to Leland's Tariffs 35-O and 123 providing that empty tank cars returned must be accompanied by regular waybills, etc.

Fayette Dow, the association's counsel at Washington, D. C., will also bring another important matter to the attention of the traffic men in his annual report which will be given Tuesday. This is concerned with the oil industry's position in the general investigation of all freight rates authorized by Congress in a joint resolution. This investigation, which is conceded to be the most important ever undertaken, will be started in the near future by the Interstate Commerce Commission. Another feature of Mr. Dow's report will be a discussion of the developments in the Government's conservation program, the present status of the controversy centering around Section 28 of the Merchant Marine Act. F. A. Pielsticker, president of the association, in his annual report on Tuesday will review the activities of the association during the past year and also discuss some of the problems confronting the western refining industry during the coming year.

Lubricants Under Oxidizing Tests

Oil Which Does Not Decompose at High Temperatures Best Suited for Use In High Speed Engines. Experiments Explained

By J. B. Hoblyn, F.I.C., A.R.C. S.

There is no need to emphasize the difference between the lubrication of a heavily-worked high speed internal combustion engine and machinery lubrication as accepted in the ordinary sense. In the latter type, the lubricant after use remains approximately of the same composition and is possessed of almost the same physical characteristics as when new. In short, the choice of the oil needs no consideration of constitutional changes during use. If such behavior held in internal combustion engine lubrication, the problem would be considerably simplified, but here we have to face the fact that oils recommended by firms who have devoted a large amount of attention to the subject are still found wanting—wanting in the sense that changes occur in both the physical and chemical properties of the oil that in many cases very quickly render it so different in character from the oil originally used that these properties can in no wise be stated in terms of those possessed by the oil when new.

Some oils, of course, are better than others, and notwithstanding the belief of some people that any old oil will behave quite as satisfactorily as one more highly refined, the fact remains that any old oil will not. It may do so in the case of engines that are not called upon to work at full load, but for the type of engine that goes all out, careful consideration must be given to the choice of the lubricant.

Alteration in Composition

Now what is the problem before us? The engineer and the car owner desire a lubricant of suitable viscosity that gives easy starting in winter, freedom from asphaltic deposits in the crankcase, a minimum of "carbon" deposit on the pistons and no oiling of the plugs. There must be no sticking of pistons and valves. The nearer the oil comes to maintaining its initial physical and chemical characteristics after use, the better it is for its purpose. Alteration in composition invariably leads to the formation of asphaltic bodies due to the action of the air and the high temperatures to which the oil is submitted, and when in this partially-decomposed condition, the viscosity in the cold state is invariably much greater than that of the oil with which we started. Observation of a large number of oils points toward the fact that those that form asphaltic bodies quickly are those possessing a low flash point, and in these cases the quick decomposition of the oil in the crankcase, producing a great amount of trouble in the starting of the engine on cold mornings, is accompanied by a partial distillation of the oil, some of the more volatile constituents being driven off and recondensing on the sparking plugs. Many, many instances could be given where this dual behavior has quickly taken place, and it is evident in such instances that an unsuitable oil has been used. It is also evident that the initial cold test on the original oil is not of much value if that oil is going to change quickly in its constitution.

Although these alterations in properties cause troubles such as have been indicated, further trouble is caused—trouble of a far-reaching nature and rendered not the less dangerous because it is frequently overlooked. This is the loss in the efficiency of the engine due to friction, which is further due to the padding that acts as the lubricant for a considerable time after the engine starts, particularly in wintry weather. "She pulls well after running about 10 minutes" is almost a slogan. These frictional losses are now receiving something of the attention they deserve, and in these days of increasing activity in getting a high power-to-weight ratio, when designers can afford to neglect nothing, it follows that this question will be increasingly studied. These losses, although recognized, have not up to recently been considered as being serious in magnitude, but Mr. Pomeroy in a paper before the S.A.E. last year showed that they could reach astounding figures and that they are of a far higher order than is generally supposed.

Changes Most Slowly

Experience shows that all oils on the market do begin at some time after use to form asphaltenes, and it appears to the author that it may be taken as axiomatic that the oil which changes most slowly is the one that deserves our most urgent consideration.

The question now arises as to how far the engineer and the car owner can be accommodated with what they want. It does not seem out of place to discuss the position as it is today, and to see how far the oil suppliers can give them oils approximating to their desires. In certain aspects the oil industry is very much alive, and not the least of these aspects is its ability to advertise. Thus the car owner, reading that every make of oil is the one most suitable for his own particular engine, and finding himself in a quandary, very often seeks the advice of the engineer as to what oil he should use, and the engineer has such a variety to choose from that fair advice is often very difficult. It may be said at the outset that it would be unfair ao expect that the engineer is able to do prolonged engine and car tests upon the manifold varieties of oils that are on the market, for that would involve a big expenditure of time and labor; and if, on the other hand, he approaches the oil supplier, the latter in his turn has not carried out tests upon the similarly manifold varieties of engines that are on the market. This again would entail considerable time and expenditure. Thus, failing the ability of both oil supplier and automobile manufacturer to give these joint tests, resort must be made on the part of the engineer to collaboration with the supplier, and from physical and chemical tests to judge which oils he considers most suitable for his purpose and then to put them to extended trial. It is, in short, imperative for him to interpret today the behavior of an oil from physical and chemical data supplied to him. Now what are these physical and chemical data required? Can we specify tests that are so sound that we can interpret the behavior of a lubricant with that confidence that is the only justification for specification?

Necessity for Tests

The importance of the necessity for such tests was emphasized in the 1920 report of the lubricants and lubrication enquiry committee of the department of scientific and industrial research in clause 7 of their recommendations of the main lines on which research is needed. In this clause they ask for the discovery of:

New methods of analysis which will enable the chemist when examining a lubricating oil in the laboratory, besides determining its viscosity, specific gravity, flash point, etc., to determine the constituents of the oil . . . to measure its ability to reduce friction and to meet the conditions of speed, load, temperature and atmosphere in which it is required to work. Much of this costly information can only be ascertained today by the costly method of trial.

Of all the tests that have been applied to oils to enable us to get some idea of what their behavior in a high-speed engine will be, it is generally accepted that the results obtained on submitting the oils to some conditions comparable with those they meet in an internal combustion engine are the most valuable. These, indeed, do signify to what extent they will depart from their original properties, and while not disparaging other tests, the author wishes to draw your attention in particular to a study of that test believed by many to be the best one for discriminating between the types of lubricants under discussion. This is the evaporation test (many times referred to as the "heat" test), and the open flash point and sludge value are considered as parts of this test. Here the oil is heated in air, and changes in constitution occur. Doctor Ormandy, in a paper on "Engine Lubricating Oils," expressed his opinion that when several oils are heated under similar conditions for a definite time at 400 degrees F., "the oil that loses the least, while leaving a residue as little altered in character as possible, will give the best results." The author's opinion today coincides with that of Doctor Ormandy, but he would like to extend to some extent, and to consider in further detail, the examination of the residue.

Residue Gives Trouble

After all, it is the residue we have with us (sometimes, of course, accompanied by recondensed volatile matter on the plugs), and it is in the main the residue that gives us trouble. In Doctor Ormandy's paper the properties of the residue were broadly described; the residue either "runs slightly," "runs readily," or "does not run." In short, visible results were considered sufficient. It is now hoped to go further, and to consider how far further visible effects—effects of magnification will help us in differentiating between oils, and to see how far certain simple microscopic observations upon oils when undergoing decomposition will help us in this direction. It must be said deliberately that this work, conducted in a simple primary way, has undoubtedly helped in discriminating between oils, and no cases have been found where a judgment of the probable behavior of an oil in an engine based upon this test has gone wrong.

Let us now consider an interesting case. After investigating a large number, two straight mineral oils were found of very similar properties. These were as follows:

	Oil 5	Oil 6
Viscosity at 140° F. (Redwood seconds)	188	195
Specific gravity	0.916	0.916
Open flash point	215°C.	215°C.
Setting point	0°C.	—6°C.

The residue in each case after 10 hours ran very freely, and both appeared very similar to the eye. Under these circumstances, one would think that the oils would behave similarly in an engine, but on testing each in a particular car engine, after 2,000 miles No. 5 had a dirty appearance in the crankcase, the contents being on the gelatinous side, the tappets were sticky, a large amount of "carbon" was on the pistons, and the dismantling of the engine revealed the fact that it was in a dirty condition. The engine was well cleaned and No. 6 oil then used. After 2,000 miles the engine was comparatively clean; indeed, after allowing the fine carbonaceous dust to settle, the oil was perfectly clean, and had, singular to say, suffered no change in viscosity. There was no dilution. No. 5 was too gelatinous to allow the dust to settle.

Sludging as a Clue

Each oil at the start made no material difference to output at any of the stated revolutions, but unfortunately it was not possible to put the engine on the bench and obtain its output after each of these oils had been used for the mileages stated, so that evidences of fractional losses cannot be given. Sufficient evidence was forthcoming, however, to show that No. 5 decomposed in such a way as to yield very dirty oil in the crankcase, and that No. 6 remained reasonably clear. The use, then, of No. 6 would mean that less attention had to be given to the engine than with No. 5, and although unfortunately one cannot speak from fact, it would probably render the engine freer from fractional losses, and there would be a corresponding diminution in the expenditure on petrol. The sludge value, determined by the method suggested in the recently published handbook of the Petroleum Technologists, gave:

No. 5	1.97%
No. 6	0.53%

In passing, it should be stated that although the sludge test was similar in principle to the recommended one, a temperature of 250 degrees C. was arbitrarily fixed upon as being more drastic and more likely to find any vital differences between the oils.

Seeing that sludging gave some clue to the differences in the two oils, and seeing that sludging renders insoluble the asphaltenes produced, it was considered that it might be interesting to try to follow the decomposition of these oils microscopically. Asphaltenes are insoluble in petroleum ether. Are they also insoluble in the higher paraffinic hydrocarbons that are constituents of lubricating oils? Are they, then, insoluble in the unchanged hydrocarbons remaining after heating? Or, are they present in the colloidal state? Twenty grammes of each sample were accordingly heated in crucibles and maintained at 250 degrees C. in the oil bath, every precaution being taken to exclude dust. Small samples were then periodically withdrawn for microscopic examination. Oil No. 5 began to show definite signs of decomposition in 16 hours, but Oil No. 6 was heated for 36 hours before signs of decomposition were evident.

Decomposition Products

The author would not, under any circumstances, say definitely at the present time what these products of decomoposition are. They may, in the first instance, be the separation of the asphalts, but whatever they are, until separation occurs we have physically a homogeneous oil; when separation does begin we have a heterogeneous one.

The following is an interesting instance to show what does occasionally happen. An oil used in a certain car engine (not one stated above) had, in the course of 500 miles, presented an appearance like what has been described as "an asphalt pavement on a summer's days." An analysis of the oil in the crankcase showed:

Oil	55.26%
Asphaltenes	8.70%
Carbenes (or matter insoluble in CCl_4)	36.00%

The above analysis is mentioned as a matter of interest only. What is considered the most important fact is that a sample of this original oil, when submitted to the usual heat test, lost 82.90 per cent in 32 hours, gave a sludge value of 10.96 per cent, and showed very visible signs of decomposition after 12 hours' heating.

One important fact is worthy of notice in connection with the decomposition of an oil. We started with an oil physically homogeneous. Here it is heterogeneous. At this stage, however, its condition would still be considered good for engine lubrication, and we should not condemn it as a bad oil. Many engines, in fact, will probably be lubricated for a considerable portion of their lives by an

(Continued on Page 127)

Only a cog in the wheel, but—

—a wheel with a missing cog generally jams. The result is a stopped machine. Time and money are wasted all because one missing cog prevents the other cogs from functioning.

The same is true of the oil business.

Many wheels must go around between the time the oil is taken from the wells and the time Mr. Car Owner drives up to his local gas station and says: "Gimme a quart of ————Oil!"

He may name oil from any part of the country—and it is essential that the oil dealer have that oil.

Thanks to the oil jobber—a cogged wheel in the oil business machine—the oil dealer almost always has a supply of what is asked for.

But suppose this dealer had to buy from the refiners. His average order would have to be split up and sent to half a dozen or more states in various parts of the country. Then he would have to wait and lose business until his order was filled.

However the oil dealer has only to call his jobber and his order is filled within 24 hours.

This the service of Acme. Only a cog in the wheel, but a reliable cog. We store oil from the refiners in our own huge tanks and are always ready to fill rush orders from the dealer with our own tank cars.

Test this service now. It will pay you, because it will improve your service—and better service means bigger business.

(This is the twenty-first of a series of informatory advertisements on the distribution problems with which the Oil Industry has to contend.)

ACME

Petroleum Company

Executive Offices: 624 S. Michigan Ave., Chicago

KANSAS CITY, MO. Land Bank Bldg.

DALLAS, TEXAS Magnolia Bldg.

OIL STORAGE PLANTS

Over 7,000,000 Gallons Storage

West Tulsa, Okla. Blue Island, Ill.

(*Chicago Switching District*)

19

CHICAGO CONSUMPTION LARGE, PRICE UP

Jobbers' Stocks Reported Ample. Growing Belief in Interdependence of All Branches of Industry. Kerosene Improved. Fuel Oil Possibly at Peak. Gas Oil Slow, Lubricants Firm. Distillates Suffer

By J. B. Waldo

CHICAGO, Feb. 7.—Reports from the larger distributing companies are that the consumption of gasoline for January was very large. Estimates and actual figures indicate that in this territory the increases ranged from 16 to 20 per cent over January 1924. February has made an excellent beginning. Possibly this increase is partly due to the weather which has been very mild and a great contrast with a year ago. An executive of one large company pointed out that the increase the country over, in the sale of gasoline during 1924 had been just about equal to the increase in the number of cars registered at the close of 1924 compared with 1923.

Jobbers' Stocks Large

Jobbers' stocks are generally believed to be rather ample. The larger companies in this vicinity have apparently supplied themselves with quantities that will carry them for some time. Ane oil man who has a very large distribution told the writer he had enough at the current rate of demand to carry him to the first part of March and others have said substantially the same thing. An inquiry was addressed to a considerable list of jobbers as to when they would be in the market and the replies indicated they would not be buyers according to their present ideas until the fifth to fifteenth of March. Some stated they expected to buy at lower prices at that time and others said they would buy now if they had the room but they were fully stocked and could not take in another tank at any price. There has been some buying for consumption and there has been some buying, if the indications are right, purely for speculation. Concerns that ordinarily do not touch the gasoline business have bought for periods of 30 days and paid the present refiners' prices. The great danger from this sort of buying is that when the time comes to take their purchases they may not find an active demand and be obliged to sacrifice their profits at least to move their supplies bought with the hope of making a "killing." A good deal depends on the weather between now and March 15 to 31.

Prices Advance

Prices have advanced during the week. A number of the stronger refiners are holding firm at 12 cents for the 437 grade. Some sales have been made at 11½ cents from marketers to marketers. One marketer has bought motor gasoline, according to verified reports, at a range of 10⅝ to 11½ cents during the week. The first price named early in the week represented the views of some marketers at that time and the 11½-cent price that of the present market. Small sales have been made at 12 cents to jobbers and the next increase in either crude or tank wagon prices will put the market squarely where the low quotation will be 12 cents. The trade is better reconciled to the thought of higher prices.

Refiners should have more money for their product. The trade here admits it. Producers are only getting what they should have according to many but there is an element in every industry that seeks low prices when it comes to buy and does not apply the same rule when it comes to sell. It is this element that is making a lot of commotion about high prices on petroleum products. The more fair minded among the trade want every branch of the industry to have enough profit to make the industry stable.

Kerosene Improving

Kerosene is beginning to show some improvement. The spring demand is nearly due and some of the jobbers have been ordering quite freely. The Sinclair Refining Co. has been purchasing but it does more or less buying each month so it really only shows that it is preparing for, if not feeling its regular demand, for the season. The tractors are the largest consumers of kerosene today. In some districts the incubators are so numerous as to consume a considerable quantity during the early spring. Refiners are asking a little more and say they are having no trouble in getting it. Quality is being stressed by some distributors who claim there is a rather critical disposition among users.

Bad Distillate Season

Distillates have had a bad season during the last two weeks. The weather man has predicted cold waves on two separate occasions but the storm has not reached this city and the only cold has been in the North. There have been some accumulations of the product here and some tank wagon people have been asking the marketers to find a buyer for their excess cars. There has also been a good deal of complaint from consumers regarding the quality of the distillate furnished and some concerns have lost a lot of consumers owing to the trouble they have had with their burners.

Fuel Oil Not So Strong

Fuel oil is not so strong. The railroads are not buying, having more than they need, in fact, some have bought more than they can take in. There is no trouble with these burners. This fact is shown by the two years contract made by one of the largest oil consumers of any transportation line. The roads in question simply got scared and bought too much. There have been some distress cars offered here which has rather unsettled the market. The general feeling here is that the fuel oil market is at its peak or past it, if we do not have a cold spell very soon. There are considerable offerings at $1.32½ and some business actually done at $1.30. A few cars have been sold at $1.37½ and a still less number at $1.40. It would be hard to get more than $1.35 today. Smackover fuel oil has been shipped here by one distributing company which evidently expected to use it in its own distribution but failed to find the required demand and it has been offering it quite generally at $1.15 to $1.20 with few takers reported. No one wants to help this particular organization out. This is not the market price which would be around $1.25 with these cars out of the way.

Gas Oil Slow

Gas oil is moving slowly for the usual grades, both light and dark, but there is a demand for the zero cold test oil. Some marketers comment that so much gas oil is offered when the gasoline demand is so large. It is generally believed here refiners are just about running every gallon of crude they can, being only limited by the size of the plant or the supply of crude. The figures of the Bureau of Mines for December are quite widely quoted as showing the great increase both in crude run and the output of the major products, gasoline, kerosene and fuel oil. For three years gasoline production has been highest in December.

Lubricants Firm

Lubricating oils are very firm and the business is generally reported to be good although the larger buyers are pretty well contracted for the future, some for the year and others for the early wants. Refiners have in some cases instructed their representatives to take no more business without referring same to the refinery. Distributors and local dealers report a good healthy demand and say industrial oils are being consumed in increasing quantities.

Naphtha prices have been advanced by the Standard Oil Co. (Ind.) which is now quoting the following rates on its special

grades: Tank car lots, f.o.b. Whiting, Oleum Spirits, 14½ cents; V. M. & P. naphthas, 15 cents, and cleaners' naphtha, 16 cents. The local tank wagon prices are, oleum spirits, 16 cents; V. M. & P. naphthas, 18 cents and cleaners' naphtha, 19 cents.

Tank wagon prices are generally unchanged. At East St. Louis the spread between the tank wagon and the station price has been increased to 2¼ cents, the station price being raised ¼ cent. At Fargo, N. D., the station and tank wagon prices were reduced 1 cent, effective February 2 at noon. There is little cutting of prices reported although locally there is some bootlegging going on at prices so much under the regular tank wagon or even the quantity price that the quality of the gasoline is under suspicion.

SOUTH TEXAS PRICES ARE VERY MUCH MIXED

HOUSTON, Tex., Feb. 9.—Quotations on Gulf Coast lubs were advanced last week. The advances range from 1 to 1½ cents per gallon. Refiners generally accept the standard that a 25-cent per barrel advance in crude is equal to a 1-cent per gallon advance in lubricating stocks and acted accordingly.

The prices given in this issue of The Journal on pale oil and red oils are from the Deepwater Refining Co. of Houston and those on pale filtered from the Galena-Signal Oil Co. of Texas, Houston headquarters. Neither the Deepwater nor the Keene & Wolfe plant make pale filtered stock. It is to be presumed these quotations are shaded some to secure competitive business and are therefore considered rather nominal, as giving the trend of the markets.

Gasoline tank wagon prices are very much mixed in South Texas, as indeed pretty well all over the State. On Thursday the Magnolia Petroleum Co. posted 19 cents at service stations. The Gulf Refining Co.'s price is 18 cents, The Texas Co. 17 cents and the Humble Oil & Refining Co. was selling at 16 cents. Some independent stations were selling at 15 cents.

Kerosene is quoted at 10 cents per gallon, with the Pierce Oil Corp. and the Cities Service Co. asking 11 cents. The latter are the only two large marketers making an advance in that product.

No reason is given by the marketers for the various prices, other than competition. Gasoline prices have been unsettled for more than a month.

Fuel oil prices are unchanged, with the local plants sold up for months ahead and therefore out of the market. North Texas refiners are asking $1.75. The Luling grade is quoted around $1.30 per barrel and Smackover at $1.75 on the Coast. Mexican delivered at Gulf ports is nominally quoted at $1.70 to $1.75, with but very little offered.

DOUBLE CAPITAL STOCK

HOUSTON, Tex., Feb. 7.—At the regular meeting of the stockholders of the Humble Pipe Line Co. the following were elected as directors of the company for the ensuing year: R. V. Hanrahan, W. S. Pillow, W. M. Cleaves, John C. Townes, Jr., F. F. Mellott and J. A. Heath.

At the meeting of directors the following officers were elected for the ensuing year; R. V. Hanrahan, president; W. S. Pillow, vice president and treasurer; R. S. Burdick, secretary and assistant treasurer, and C. D. Voss, assistant secretary.

One of the matters coming before the stockholders meeting related to the increase of the capital stock of the company, and after careful consideration the stockholders voted to increase the capital stock from $12,000,000, as at present, to $24,000,000. This increase in capital stock has been necessitated by reason of the need for additional capital for financing the extension of the company's facilities into Reagan County and other sections of the State in an attempt to meet more effectively the expanding demands of the oil producers.

SHARP ADVANCES IN EASTERN MARKET FUEL OIL STRONG; KEROSENE STRONG

By N. O. Fanning

NEW YORK, February 7.—Further sharp advances in gasoline prices were the feature of the eastern refined oil markets during the past week. Price increases aggregated 2½ cents per gallon, bringing the tank wagon market up to an average of 20 cents. In New York and New England the present tank wagon price is 21 cents, while in New Jersey and States south of that the average is 19 cents.

Price increases in the territory of the Standard Oil Co. of New York since January 1 aggregate 6 cents per gallon. It is doubtful whether this record of advances can be duplicated in recent years. At the rate of 6 cents per gallon, the advance amounts to approximately $2.50 per barrel. The price of high-grade crude has advanced only $1 per barrel so far, but in view of the advances in gasoline, higher prices for crude are looked for in the immediate future.

Reasons for the record price advances are numerous, but are not so generally apparent. A few of them, as given by leading oil men in various branches of the industry to the writer, follow:

(1) Belief on the part of leading oil men having direct authority as to prices that higher prices are necessary to bring about a speeding up of production of both crude petroleum and gasoline, in view of the present downward course of output.

(2) Small crude stocks at refineries at the close of November due to heavy consumption, which has brought about stiff competition for crude on the part of these refiners.

(3) Strong situation as to stocks, crude and refined being in strong hands.

(4) Belief of oil men that the industry, after several years of famine is entitled to a larger return; and that higher prices will be of benefit to the consumer in the end by resulting in renewed drilling with probably larger production of crude.

Refinery Price Up

In addition to advances in the eastern tank wagon markets, refiners at Bayonne and other eastern refining centers put up the refinery price of Navy and higher grades of gasoline 3 cents to 17. They have practically withdrawn from the market, however, and little business is being done in the bulk product.

Kerosene Firm

Although kerosene prices have so far failed to move, advances are regarded as an almost certainty in the immediate future. The price of this product has advanced in the West and abroad, and in view of this and in view of the fact that crude and other refined products with few exceptions are advancing, it is expected the tank wagon market here will increase without fail.

Fuel Oil Strong

The local domestic and bunker fuel oil market is strong. Bunker oil may go higher any day, in the opinion of local marketers. It is said none can be had on new contracts for less than $2.25 per barrel. The quoted price of $1.80 now in effect is regarded more or less as nominal.

Gas oil holds firm, with domestic business at a standstill.

Lubricants and Wax

No change in lubricating oil prices has been recorded, the prices now in effect being relatively higher for this product than gasoline or fuel oil. It is possible advances in gasoline and fuel oil may have the effect of softening the lubricating oil market. Refiners have depended more on lubricating oil recently than is the custom, but with higher returns from other products, may reduce lubricating oils. This is a possibility of the next few months, however, nothing immediate being in store.

The wax market is taking on more color, with activity much greater. Inquiries from trade sources are numerous. Prices of 125-127 and 130-132 a.m.p. have advanced one-eighth of a cent a pound.

Export Market Mixed

Although the bulk export market is temporarily at almost a standstill so far as gasoline, kerosene, gas oil and fuel oil are concerned, the movement of lubricating oil in bulk, barrels and cases is extremely heavy.

The steamer City of Auckland left January 29 with one of the largest barrel consignments recently recorded, comprising 19,868 bbls. for India. The second largest barrel shipment was on February 4, when the Westphalia left with 9,770 bbls. for Germany.

The tanker Tiverton also sailed during the week with a shipment consisting of 365,994 gallons for Belgium and 1,119,093 gallons for France.

Total shipment of lubricating oil during the week in bulk barrels and cases, aggregated 3,768,827 gallons.

Prices Advance in Europe

On February 5 gasoline was advanced 1 penny per gallon in England. The price of gasoline was raised the equivalent of 2 cents per gallon in France during the week. These increases bring the total so far this year to an average of 4 cents per gallon. It is said there have been no advances in Belgium or Germany due to price wars.

The following table shows principal exports of petroleum and petroleum products from New York reported during the past three weeks (figures in gallons unless otherwise stated):

Item, How Shipped—	Week Ended Feb. 4	Jan. 28	Jan. 21
Gasoline:			
Cases	1,858,020	1,072,800	883,690
Kerosene:			
Cases	973,321	2,992,340	1,315,530
Lub. oil:			
Bulk	1,485,087	.....	.....
Barrels	2,150,200	1,012,000	1,417,650
Cases	133,540	.....	.....
Lub. grease:			
Barrels	.....	515	.....
Paraffin wax:			
Bags (lbs.)	682,440	110,000	2,231,020
Barrels	.....	2,826	1,910
Pet. asphalt:			
Barrels	2,143	.....	.....
Crude oil:			
Barrels	3,316	505	.....

Although there has been a drop in bulk shipments from New York, exporters say the movement from the Gulf Coast has increased. Exports from New York are principally in cases or barrels.

Tanker Market

New fixtures in the tanker chartering market included:

Tanker W. W. Mills (Pure Oil Co.), February loading, San Pedro to New Orleans, rate not disclosed.

Tanker Cynthiana (Br.), March loading, gasoline and kerosene, (2,000,000 gallons), North Atlantic to Portugal, 32s 6d.

While there has been a lull in chartering, rates tend higher. Many vessels have been chartered for the whole year, taking them out of the markets entirely. The result is a scarcity of vessels, particularly those under foreign registry.

Receipts Decline

Estimated receipts of crude and refined oil by water at Atlantic ports averaged 444,000 bbls. daily during the week ended February 4, against 630,000 bbls. daily the preceding week. Daily average receipts from the Gulf declined 137,000 bbls., from the Pacific 17,000 bbls., while imports declined 32,000 bbls.

Receipts from the Pacific Coast since January 1 have averaged about 73,000 bbls. daily, or somewhat less than half those of the same period last year.

Imports during the last two weeks averaged 150,000 bbls. daily., which compares favorably with the best figures of 1924.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic ports from Gulf and Pacific Coasts of the United States, and imports, for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended Feb. 4	Jan. 28	Jan. 21
Gulf Coast	249,000	386,000	257,000
Pacific Coast	61,000	78,000	36,000
Imports	134,000	166,000	68,000
Total	444,000	630,000	351,000

Daily Averages by Months

	Gulf	Pacific	Imports	Total
Jan., 1925	311,000	77,000	133,000	521,000
Dec., 1924	306,000	83,000	85,000	474,000
November	246,000	80,000	150,000	476,000
October	246,000	120,000	88,000	454,000
September	270,000	104,000	101,000	476,000
August	310,000	127,000	84,000	521,000
July	318,000	85,000	114,000	517,000
June	302,000	133,000	136,000	571,000
May	276,000	122,000	144,000	542,000
April	262,000	143,000	123,000	528,000
March	201,000	137,000	130,000	468,000
February	174,000	175,000	108,000	457000

Imports are largely from Mexico, with occasionally a shipment from Venezuela, Trinidad or Peru.

OIL CITY REPORTS BUYING FOR STORAGE

OIL CITY, Pa., Feb. 9.—Increases in crude oil and gasoline prices throughout the country during the past week have had a very encouraging effect on the market for oil products which are refined in northwestern Pennsylvania and the market looks much better than it has for many months

Gasolines are very strong with a great deal more buying on account of jobbers and marketers stocking up on motor fuels. The refineries here have no difficulty in selling all the gasolines which they desire to offer at the present time, but the bulk of the sales are for storage purposes, as the actual consumption is down fairly low on account of the weather conditions. During the week the increase in some of the grades of gasolines was nearly 2 cents.

Kerosene is no better than it has been. It seems to be holding its own but that is about all that can be said. The price is about the same. In fact the total increase since the time the crude advance was first announced is only about ¼ cent.

Neutrals are stronger. The price is up but there is no great demand for these products. Cylinder stocks are in excellent condition. The price is up and the demand big. The larger companies are now in the market in this district and it is thought that they are buying Pennsylvania cylinder stocks for export purposes. The demand for the unfiltered type is very big while the filtered goods are not finding so ready a market at present.

Fuel oil is possibly a trifle weaker than it has been. Wax continues to be very strong. There is not so much demand as there has been but on the other hand the refiners have little to offer.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended January 31 totaled 377,000 bbls., a daily average of 53,857 bbls., against 360,000 bbls., a daily average of 51,429 bbls. for the week ended January 24.

At Atlantic Coast ports—	Week Ended Jan. 31
Baltimore	74,000
New York	75,000
Philadelphia	148,000
Others	80,000
Total	377,000
Daily average	53,857

According to figures collected by the American Petroleum Institute imports of crude and refined oils at the principal ports for the week ended January 31 totaled 1,865,000 bbls., a daily average of 266,428 bbls., compared with 1,550,000., a daily average of 221,429 bbls. for the weke ended January 24.

At Atlantic Coast ports—	Week Ended Jan. 31
Baltimore	92,000
Boston	55,000
New York	486,000
Philadelphia	126,000
Others	391,000
Total	1,054,000
Daily average	150,571
At Gulf Coast ports—	
Galveston district	152,000
New Orleans and Baton Rouge	498,000
Port Arthur and Sabine district	86,000
Tampa	75,000
Total	811,000
Daily average	115,857
At all United States ports—	
Total	1,865,000
Daily average	266,428

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Feb. 10		Feb. 3		Jan. 27	
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.11¼	.11½	.10	.10½	.08	.08¼
56-58 450 end point	.11½	.12	.10½	.11	.09¼	.09½
58-60 437 end point (U. S. Motor)	.12	.12¼	.11	.11¼	.09¾	.10
60-62 400 end point	.13½	.13¾	.12½	.13	.11	.11¼
64-66 375 end point	.15	.15¼	.14½	.14¾	.12¾	.13¼
68-70 350 end point	.15¼	.15½	.15	.15½	.13¼	.13½
KANSAS—						
58-60 437 end point (U. S. Motor)	.12¼	.12½	.11¼	.11½	.09¾	.10
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.11¼	.11½	.09¾	.10	.07½	.07¾
50-52 440 end point (Naphtha)	.11½	.11¾	.09¾	.10	.07¾	.08
56-58 450 end point	.11½	.12	.10¾	.11	.09½	.09¾
58-60 437 end point (U. S. Motor)	.12¼	.12½	.11¼	.11½	.10	
60-62 400 end point	.14	.14¼	.13	.13¼	.11¼	.11½
64-66 390 end point	.14¾	.15	.14¼	.14½	.12¾	.13
64-66 375 end point	.15¼	.15½	.14½	.15	.13	.13¼
68-70 360 end point	.15½	.15¾	.15¼	.15½	.13¼	.13½
NORTH LOUISIANA—						
56-58 450 end point	.11¾	.12	.10¾	.11	.09½	.09¾
58-60 437 end point (U. S. Motor)	.12¼	.12½	.11¼	.11½	.10	.10¼
60-62 400 end point	.13½	.13¾	.12½	.12¾	.11¼	.11½
64-66 390 end point	.15	.15¼	.14	.14½	.12½	.12¾
64-66 375 end point	.16	.16¼	.15	.15¼	.12¾	.13
ARKANSAS—						
58-60 450 end point	.12½	.12¾	.10¾	.11	.09½	.09¾
58-60 437 end point (U. S. Motor)	.12¾	.13	.11¼	.11½	.10	.10½
64-66 375 end point	.15½	.15¾	.14¾	.15	.13¼	.13½
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.15¼	.15½	.14¼	.14½	.13¼	.13½
PENNSYLVANIA—						
52 Naphtha	.13½		.12		.11	
54 Naphtha	.13¾		.12½		.11¼	
56 Gasoline	.14¼		.12¾		.11½	
58 Gasoline	.14¾		.13½		.12	
60 Gasoline	.15¼		.14		.12½	
62 Gasoline	.15½		.14¾		.13½	
64 Gasoline	.16		.15½		.15	
66 Gasoline	.17		.17		.15½	
68-70 Gasoline	.18¾		.18		.16½	
CALIFORNIA—						
54-56 437 end point (U. S. Motor) domestic	.11	.11½	.09	.09½	.09	.09½
CHICAGO DIST. (Based on Group 3)—						
50-52 450 end point (Naphtha)	.11	.11¼	.09	.09½	.08¼	.08½
56-58 450 end point	.11¼	.11½	.10¼	.10¾	.08¾	.09
58-60 437 end point (U. S. Motor)	.12	.12¼	.11	.11¼	.09½	.09¾
60-62 400 end point	.13½	.13¾	.12½	.12¾	.11	.11¼
64-66 375 end point	.15	.15¼	.14¼	.14½	.12¼	.12½
68-70 360 end point	.15½	.15¾	.14¾	.15¼	.13	.13¼

*Colorado points.

NATURAL GASOLINE

	Feb. 10		Feb. 3		Jan. 27	
OKLAHOMA (Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11½	.11¾	.10½		.09½	.09¾
Grade A, 72-79.9, 375 end point, rec. 90%	.11¾		.10½		.09¾	.10
Grade Double B, 84-92, 375 e.p., rec. 95%	.11	.11¼	.10		.09	
Grade B, 76-83.9, 375 end point, rec. 85%	.11	.11¼	.10		.09	.09¼
Grade C, 80-90, 375 end point, rec. 78%	.10¾		.09½		.08½	
NORTH TEXAS—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11¾		.10¼	.10½	.09½	.09¾
Grade A, 72-79.9, 375 end point, rec. 90%	.11¾		.10¼	.10½	.09½	.09¾
Grade Double B, 84-92, 375 e.p., rec. 85%	.11	.11¼	.09¾	.10	.08¾	.09¼
Grade B, 76-83.9, 375 end point, rec. 85%	.11	.11¼	.09¾	.10	.08¾	.09¼
Grade C, 80-90, 375 end point, rec. 78%	.10½	.10¾	.09¼	.09½	.08½	
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 end point, rec. 90%	.14		.10½	.10¾	.09½	.10
Grade C, 76-82, 375 end point, rec. 85%	.12		.09½	.09¾	.09	
CALIFORNIA—						
68-80 absorption, 360-390 end point	.13½	.14	.11	.11½	.11	.11½
78-84 compression, 350 end point	.13¾		.11½		.11½	
CHICAGO DIST. (Based on Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11¼	.11½	.10¼	.10½	.09½	.09¾
Grade A, 72-79.9, 375 end point, rec. 90%	.11½	.11¾	.10½	.10¾	.09½	.09¾
Grade Double B, 84-92, 375 e.p., rec. 85%	.10¾	.11	.09¾	.10	.09	.09¼
Grade B, 76-83.9, 375 end point, rec. 85%	.11	.11¼	.10	.10¼	.09	.09¼
Grade C, 80-90, 375 end point, rec. 78%	.10½	.10¾	.09¼	.09½	.08½	

MOTOR NATURAL GASOLINE (BLEND)

	Feb. 10	Feb. 3	Jan. 27
OKLAHOMA (Group 3)—			
60-62 450 end point	.11¾ .12	.10½	.09 .09¼
64-66 437 end point	.11¾ .12	.10½	.09¼ .09½
68-70 430-435 end point	.11¾ .12	.10½	.09¼ .09½
NORTH TEXAS—			
58-62 440 end point	.12	.10½	.09½
58-60 450 end point	.12	.10½	.09½
PENNSYLVANIA—			
*60-62	.14¾	.13½	.11½
*64-68	.14¾	.13½	.11¾
*66-68	.14¾	.13½	.12
*68-70	.14¾	.13½	.12
CHICAGO DIST. (Based on Group 3)—			
60-62 450 end point	.11½ .11¾	.10 .10¼	.09 .09¼
64-66 410 end point	.11½ .11¾	.10 .10¼	.09 .09¼
68-70 437 end point	.11¾ .12	.10¼ .10½	.09¼ .09½

*At Sistersville, W. Va.

BURNING OIL

	Feb. 10	Feb. 3	Jan. 27
KANSAS—			
41-43 water white Kerosene	.04¾ .04⅞	.04½ .04⅝	.04½ .04⅝
NORTH LOUISIANA—			
41-43 prime white Kerosene	.05	.05	.05
42-44 water white Kerosene	.05¼	.05¼	.05¼
OKLAHOMA (Group 3)—			
41-43 water white Kerosene	.04½ .04⅝	.04⅜ .04⅝	.04⅜ .04⅝
42-44 water white Kerosene	.04⅝ .04¾	.04½ .04⅜	.04½ .04⅜
40-41 prime white Kerosene	.04⅝ .04¾	.04⅛ .04¼	.04⅛ .04⅜
ROCKY MOUNTAIN STATES—			
*40-42 water white Kerosene	.07½ .07¾	.07½ .07¾	.07½ .07¾
NORTH TEXAS—			
41-43 water white Kerosene	.04⅜ .04⅝	.04⅜ .04⅝	.04⅜ .04⅝
40-42 prime white Kerosene	.04⅜ .04¼	.04⅛ .04¼	.04⅛ .04¼
41-43 prime white Kerosene	.04⅛ .04¼	.04⅛ .04¼	.04⅛ .04¼
42-44 water white Kerosene	.04⅝ .04¾	.04⅝ .04¾	.04⅝ .04¾
ARKANSAS—			
41-43 water white Kerosene	.05 .05¼	.05 .05¼	.05 .05¼
42-44 water white Kerosene	.05¼ .05½	.05¼ .05½	.05¼ .05½
PENNSYLVANIA—			
43 Kerosene prime white	.07¼	.07¼	.07
45 Kerosene water white	.07½	.07½	.07¼
46 Kerosene water white	.08¼	.08	.07¾
47 Kerosene water white	.08½	.08½	.08
34 Neutral	.08¾	.08½	.09
34 Sundebloomed Neutral	.10	.09½	.07¾
36 Miners' Neutral	.08	.08	.06½
300 Mineral Seal	.08	.08	.07½
CALIFORNIA—			
40-42 water white (high burning test)	.07½ .08	.07½ .08	.07½ .08
Engine distillate, 43-45 445 end point	.08½ .09	.06 .06½	.06 .06½
Engine distillate, 42-44 480 end point	.07¾ .08	.05½ .05¾	.05½ .05¾
CHICAGO DIST. (Based on Group 3)—			
41-43 water white Kerosene	.04½ .04¾	.04½ .04¾	.04½ .04¾
42-44 water white Kerosene	.04¾ .05	.04¾ .05	.04⅝ .04¾

*Colorado points.

FUEL OILS

	Feb. 10	Feb. 3	Jan. 27
KANSAS—			
24-26 Fuel Oil	1.50 1.55	1.45 1.50	1.45 1.50
32-36 Gas Oil	.03¾ .03⅞	.03¾ .03⅞	.03¾ .03⅞
38-40 Distillate	.04⅛ .04¼	.04⅛ .04¼	.04⅛ .04¼
OKLAHOMA (Group 3)—			
22-26 Fuel Oil (sellers' cars)	1.30 1.35	1.32½ 1.35	1.30 1.35
24-26 Fuel Oil (buyers' cars)	1.30 1.35	1.30 1.35	1.30 1.35
24-26 Fuel Oil (sellers' cars)	1.32½ 1.35	1.35 1.37½	1.35
28-30 Fuel Oil (sellers' cars)	1.40 1.45	1.40 1.45	1.40 1.45
32-36 Gas Oil	.03¾ .03⅞	.03¾ .03⅞	.03¾ .03⅞
36-38 Distillate	.03¾ .03⅞	.03¾ .03⅞	.03¾ .03⅞
38-40 Straw distillate	.04 .04⅛	.04 .04⅛	.04 .04⅛
NORTH TEXAS—			
24-26 Fuel Oil (sellers' cars)	1.40 1.50	1.40 1.45	1.30 1.35
26-30 Fuel Oil	1.50 1.55	1.50 1.55	1.35 1.40
32-36 Gas Oil	.03¾ .03⅞	.03¾ .04	.03⅝ .03¾
36-38 Distillate	.03¾ .03⅞	.03¾ .03⅞	.03¾ .03⅞
38-40 Straw distillate	.04 .04⅛	.04 .04⅛	.04 .04⅛
NORTH LOUISIANA—			
18-20 Fuel Oil	1.40 1.45	1.30 1.35	1.30
32-36 Gas Oil	.04 .04¼	.03¾ .03⅞	.03½ .03¾
ARKANSAS—			
38-40 Distillate	.04¼ .04½	.04¼ .04⅜	.04¼ .04⅜
32-36 Gas Oil	.04 .04¼	.04 .04⅛	.04 .04⅛
22-26 Refinery Fuel Oil	1.30 1.35	1.30 1.35	1.30 1.35
GULF COAST (South Texas)—			
Gas Oil	.04½ .05	.04½ .05	.04½ .05
Fuel Oil	1.65	1.65	1.65
PENNSYLVANIA—			
30-34 Fuel Oil	.06¼	.06¼	.06¼
36-40 Fuel Oil	.07	.07	.06½
CALIFORNIA—			
33-36 Distillate	.04¾ .05	.04 .04½	.04 .04½
27-33 Distillate	.04½ .04¾	.03¾ .04	.03¾ .04
15-20 Fuel Oil (at tide water)	1.60 1.65	1.40	1.40
CHICAGO DIST. (Based on Group 3)—			
24-26 Fuel Oil (sellers' cars, Group 3)	1.30 1.35	1.30 1.35	1.35 1.40
22-24 (El Dorado)	1.30 1.35	1.30 1.35	1.35 1.40
18-20 (Smackover)	1.25 1.30	1.25 1.30	1.30 1.35
32-36 Gas Oil	.02⅝ .02⅞	.03⅞ .04	.03⅞ .04
36-38 Distillate	.03¾ .04	.04 .04⅛	.03⅞ .04
38-40 Straw distillate	.03⅞ .04⅛	.04⅛ .04¼	.04 .04⅛

LUBRICATING OILS AND WAX

	Feb. 10	Feb. 3	Jan. 27
OKLAHOMA (Group 3)—			
Neutrals:			
70-80 vis., 2½ color, 20-25 cold test	.06 .06½	.06 .06½	.04 .04⅛
100 vis., 2 color, 20-25 cold test	.07½ .08	.07½ .08	.04½ .05
100 vis., 3 color, 20-25 cold test	.07 .07½	.07 .07½	.04 .04⅛
150 vis., 3 color, 20-25 cold test	.08½ .09	.08½ .09	.07 .07½
150 vis., 4 color, 20-25 cold test	.08¼ .08¾	.08¼ .08¾	.06½ .07
180 vis., 4 color, 23-28 cold test	.09 .09½	.09 .09½	.08 .08½
180 vis., 3 color, 23-28 cold test	.09¼ .09¾	.09¼ .09¾	.08½ .09
200 vis., 3 color, 23-28 cold test	.10¾ .11¼	.10¾ .11¼	.10 .10½
200 vis., 4 color, 23-28 cold test	.10½ .11	.10½ .11	.09½ .10
220 vis., 3 color, 25-30 cold test	.13 .13½	.13 .13½	.11½ .12
220 vis., 4 color, 25-30 cold test	.12½ .13	.12½ .13	.10¾ .11½
240 vis., 3 color, 25-30 cold test	.14½ .15	.14½ .15	.13½ .14
240 vis., 4 color, 25-30 cold test	.14 .14½	.14 .14½	.12¾ .13¾
280 vis., 3 color, 25-30 cold test	.17½ .18	.17½ .18	.16½ .17
280 vis., 4 color, 25-30 cold test	.16½ .17	.16½ .17	.15 .15½
Red Neutrals:			
180 vis., 5 color, 23-28 cold test	.08¾ .09¼	.08¾ .09¼	.07½ .08
180 vis., 6 color, 23-28 cold test	.13½ .14	.13½ .14	.12¼ .12¾
200 vis., 5 color, 23-28 cold test	.10¼ .10¾	.10½ .10¾	.09 .09½
200 vis., 6 color, 23-28 cold test	.14½ .15	.14½ .15	.13 .13¼
220 vis., 5 color, 25-30 cold test	.12 .12½	.12 .12½	.10 .10½
220 vis., 6 color, 25-30 cold test	.16¼ .16¾	.16¼ .16¾	.14¾ .14¾
240 vis., 5 color, 25-30 cold test	.13½ .14	.13½ .14	.12 .12½

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

240 vis., 6 color, 25-30 cold test	.17¼	.17¾	.17¼	.17¾	.15¼	.15¾
280 vis., 5 color, 25-30 cold test	.15½	.16	.15½	.16	.13½	.14
Cylinder Stocks—						
180-200 vis., S. R. green, 40-45 cold test	.08½	.09	.08½	.09	.08½	.09
180-200 vis., S. R. green, 40-45 cold test	.08½	.09	.08½	.09	.08½	.09
170-190 dark green, 40-45 cold test	.06½	.07	.06½	.07	.06½	.07
600, E filtered	.20½	.21½	.20½	.21½	.20	.21
180-200 vis. @ 210 "D" Bright Stock	.35		.35		.34	
200-210 vis. @ 210 "E" Bright Stock	.30		.30		.29	
150 vis. @ 210 "D" Bright Stock	.31		.31		.30	
150 vis. @ 210 "E" Bright Stock	.27		.27		.26	
Waxes:						
124-126 White Crude Scale Wax	.05⅛	.05⅜	.05¼	.05⅝	.05⅛	.05¼
PENNSYLVANIA—						
150, 3 color	.22		.22		.21½	
180, 3 color	.24½		.24½		.24	
200, 3 color	.26		.26		.25½	
220, 3 color	.28½		.28½		.28	
600, steam refined	.23¼		.23¼		.23	
635, steam refined	.28½		.28		.27	
650, steam refined	.38½		.38½		.29½	
600, Pennsylvania flash	.35		.35		.35	
630, Pennsylvania flash	.39½		.39½		.39½	
*550, E filtered	.24		.24		.23½	
*600, E filtered	.27½		.27		.26½	
600, E filtered	.26½		.26		.25½	
600, D filtered	.32½		.32½		.32	
550, E filtered	.23		.23		.23	
550, D filtered	.27		.27		.27	
Pennsylvania Bright Stock	.40½		.41		.41	
122-124 White Crude Scale Wax	.05¾		.05¾		.05¾	
†122-124 White Crude Scale Wax	.05⅞		.05⅞		.05¾	

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06½	.07	.06½	.07	.06½	.07
No. 2 color, 100 vis., pale oil	.09½	.10½	.08½	.09½	.08½	.09½
No. 2 color, 150 vis., pale oil	.11	.12	.10	.11	.10	.11
No. 3 color, 200 vis., pale oil	.14	.15	.13	.14	.13	.14
No. 3 color, 300 vis., pale oil	.16	.17	.15	.16	.16	.17
No. 3½ color, 500 vis., pale oil	.18	.19	.17	.18	.18	.19
No. 3½ color, 750 vis., pale oil	.23½	.24½	.22½	.23½	.22½	.23½
No. 4½ color, 1200 vis., pale oil	.26½	.27½	.25½	.26½	.25½	.26½
No. 4½ color, 2000 vis., pale oil	.30	.31	.29	.30	.29	.30
No. 2 plus color, 150 vis., pale filtered	.22½		.20½		.20½	
No. 2 plus color, 200 vis., pale filtered	.24		.22		.22	
No. 2½ minus color, 300 vis., pale filtered	.27½		.25½		.25½	
No. 2½ color, 500 vis., pale filtered	.31½		.29½		.29½	
No. 2½ color, 800 vis., filtered	.41½		.39½		.39½	
No. 5 to 6 color, 200 vis., red oil	.12½	.13½	.11½	.12½	.11½	.12½
No. 5 to 6 color, 300 vis., red oil	.14½	.15½	.13½	.14½	.14½	.15½
No. 5 to 6 color, 500 vis., red oil	.16½	.17½	.15½	.16½	.15½	.16½
No. 5 to 6 color, 750 vis., red oil	.21½	.22½	.20½	.21½	.20½	.21½
CALIFORNIA—						
200 vis., 2½-3 color	.14½	.15½	.14½	.15½	.14½	.15½
300 vis., 2 -4 color	.16	.17	.16	.17	.16	.17
350 vis., 3½-4 color	.17½	.18½	.17½	.18½	.17½	.18½
400 vis., 4 -4½ color	.19	.20	.19	.20	.19	.20
Red Neutrals:						
200 vis., 4½-5 color	.13	.14	.13	.14	.13	.14
300 vis., 5 -6 color	.14	.15	.14	.15	.14	.15
400 vis., 5 -6 color	.16	.17	.16	.17	.16	.17
500 vis., 6 -6½ color	.17	.18	.17	.18	.17	.18
600 vis., 6½ plus color	.18	.19	.18	.19	.18	.19

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK DOMESTIC MARKET

Bayonne Refinery Prices:	Feb. 10	Feb. 3	Jan. 27
U. S. Motor Gasoline, 58-60 437	.17	.14	.13
*Bunker Oil, 14-16 Be.	1.80	1.80	1.80
*Diesel Oil, 28-30 Be.	2.70	2.70	2.10
Furnace Oil, New York City	.10	.10	.10
Gas Oil, 32-36 Be.	.06¾	.06¾	.05¼
41-43 Kerosene prime white	.09	.09	.09

*Lighterage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

Motor Gasoline:	Feb. 10	Feb. 3	Jan. 27
58-60 Be. gravity, in cases	.29.15	.29.15	.28.15
U. S. Navy, in bulk	.15	.15	.14
Naphtha:			
60° F., 59-61 Be. gravity, in bulk	.17¾	.17¾	.16¾
60° F., 63-66 Be. gravity, in bulk	.19	.19	.18
60° F., 66-68 Be. gravity, in bulk	.20½	.20½	.19½
Kerosene:			
Standard white, 40-42 Be. grav., in bulk	.06½	.06½	.06½
Standard white, 40-42 Be. grav., in barrels	.13½	.13½	.13½
Standard white, 40-42 Be. grav., in cases	.16.9	.16.9	.16.9
Water white, 42-44 Be. grav., in bulk	.07½	.07½	.07½
Water white, 42-44 Be. grav., in barrels	.14½	.14½	.14½
Water white, 42-44 Be. grav., in cases	.17.9	.17.9	.17.9
†Lubricating Oils:			
Cylinder Stock, extra light filtered, 600, in barrels	.46½	.46½	.46½
Cylinder Stock, light filtered, 600, barrels	.40½	.40½	.40½
No. 1 white neutral, .878 spec. grav.	.43	.43	.43
No. 1 Summer Black, .895 spec. grav.	.18	.18	.18
No. 5 Bright Stock, .897 spec. grav.	.50½	.50½	.50½
Special "A" red oil, .897 spec. grav., 170 vis.	.21	.21	.21
No. 2 red oil, .903 spec. grav., 212 vis.	.22	.22	.22
No. 1 red oil, .905 spec. grav., 265 vis.	.23	.23	.23
Polar red oil, .906 spec. grav., 295 vis.	.25	.25	.25
Pale oil, "25", .899 spec. grav.	.20½	.20½	.20½
Pale oil, "28", .892 spec. grav.	.16	.16	.16
Paraffin Wax:			
120-122 a.m.p., per lb.	.06¼	.06⅛	.06⅛
125-127 a.m.p., per lb.	.06⅜	.06¼	.06¼
130-132 a.m.p., per lb.	.06⅝	.06⅝	.05⅝
135-137 a.m.p., per lb.	.07½	.07½	.07½

†All lube prices in barrels:

LOS ANGELES EXPORT MARKET

	Feb. 10		Feb. 3		Jan. 27	
Kerosene water white	.05	.05½	.05	.05½	.05	.05½
U. S. Motor gasoline, 54-56, 437 end point	.10½	.11	.08½	.09	.08½	.09

CRUDE OIL PRICES

(Crude price changes on Page 122)

Arkansas and North Louisiana

Caddo, 38° and above	$1.80
35° to 37.9°	1.70
32° to 34.9°	1.60
Below 32°	1.45
Homer, 35° and above	1.55
33° to 34.9°	1.45
31° to 32.9°	1.35
Below 31°	1.20
Haynesville, 33° and above	1.45
Below 33°	1.35
El Dorado, 33° and above	1.45
Below 33°	1.35
Bull Bayou, 38° and above	1.60
35° to 37.9°	1.45
32° to 34.9°	1.30
Cotton Valley	1.25
De Soto	1.65
Crichton	1.45
Bellevue	1.75
*Stephens, Ark:	
Below 26°	1.15
26° and above	1.35
Smackover:	
Below 25°	1.15
25° to 25.9°	1.25
26° to 26.9°	1.35
27° to 27.9°	1.40
28° and above	1.45

*Posted by Atlantic Oil Producing Co.

Wyoming and Montana

Rock Creek (Wyo.)	1.40
Salt Creek	1.30
Big Muddy	1.30
Mule Creek	1.00
Grass Creek (light)	1.65
Elk Basin	1.65
Lance Creek	1.60
Osage	1.60
Cat Creek (Mont.)	1.65
Sunburst (Mont)	1.12
Lost Soldier	1.04
Greybull and Torchlight	1.65
Hamilton Dome	1.30
Hogback, N. Mex.	1.70

Lost Soldier and Lander based on contracts covering entire production of fields.

Oklahoma, Kansas, North and Central Texas

Prairie Oil & Gas Co. and other major purchasing companies, except as noted:

Below 30°	1.15
30° to 32.9°	1.35
33° to 35.9°	1.55
36° to 38.9°	1.70
39° to 41.9°	1.85
42° and above	2.00
Sinclair Crude Oil Purchasing Co.—	
39° to 41.5°	1.85
41.6° and above	2.00

The Texas Co. (Wortham and other East Central Texas Crudes):

Below 32°	$1.45
32° to 34.9°	1.60
35° to 37.9°	1.70
38° and above	1.80
Magnolia Petroleum Co.:	
Below 28°	.90
28° to 30.9°	1.15
*31° to 32.9°	1.35
Corsicana light	1.80
Corsicana Heavy	1.00
Mexia and Wortham	1.80

*33° gravity and above, same as Prairie.

Humble Oil & Refining Co.

Powell, Currie, Richland	1.80
Mexia and Wortham	1.80
Moran Crude:	
Below 30° gravity	1.15
30° to 32.9°	1.35
33° to 35.9°	1.55
36° and above	1.70

Ranger and North Texas, same as Prairie.

Gulf Coast

Grade "A"	1.75
Grade "B"	1.70
Luling (based on contracts) 90c and	1.15
Laredo (Magnolia Petroleum Co.)	.85
Rockdale-Minerva (Milam County)	1.25
Calliham (Live Oak-McMullen)	1.15
*High Island	.85

*Posted by Sun Co.

***Somerset**

26° and above	.95
Below 26°	.85

Posted by Grayburg Oil Co.

California

14° to 19.9°	$1.25
20° to 20.9°	1.27
21° to 21.9°	1.30
22° to 22.9°	1.33
23° to 23.9°	1.36
24° to 24.9°	1.40
25° to 25.9°	1.44
26° to 26.9°	1.48
27° to 27.9°	1.52
28° to 28.9°	1.56
29° to 29.9°	1.60
30° to 30.9°	1.64
31° to 31.9°	1.68
32° to 32.9°	1.72
33° to 33.9°	1.76
34° to 34.9°	1.80
35° and above	1.85

Rosecrans-Athens Field, only:

Below 35.9° gravity, same as other fields.	
36° to 36.9°	1.92
37° to 37.9°	2.00
38° to 38.9°	2.08
39° to 39.9°	2.16
40° to 40.9°	2.24
41° to 41.9°	2.32
42° and above	2.40

Eastern States

Penna Grade Oil in New York Transit Lines	$3.60
Bradford District Oil in National Transit Lines	3.60
Penna Grade Oil in National Transit Lines	3.50
Penna Grade Oil in Southwest Pa. Pipe Lines	3.50
Penna Grade Oil in Eureka Pipe Line Lines	3.50
Penna Grade Oil in Buckeye Pipe Line Lines	3.50
Cabell Grade Oil in Eureka Pipe Line Lines	1.95
Corning Grade Oil in Buckeye Pipe Line Lines	1.95
Somerset Medium Oil in Cumberland Pipe Line Lines	2.05
Somerset Light Oil in Cumberland Pipe Line Lines	2.20
Ragland Grade Oil in Cumberland Pipe Line Lines	1.20
Lima	2.08
Wooster	1.95
Illinois	1.87
Indiana	1.88
Princeton	1.87
Plymouth	1.40
Waterloo	1.00
†Oil Springs, Canada	2.80
†Petrolia, Canada	2.73
*Western Kentucky, 36° and above	1.80
*Western Kentucky, 33° to 35.9°	1.70
*Western Kentucky, 32.9° and below	1.60
Cumberland, Warren and Monroe Counties (Kentucky), (Paragon Development Co.)	2.20

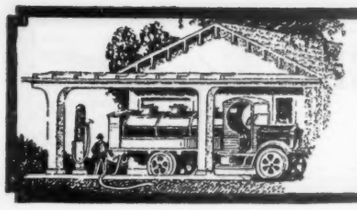
†Plus Government bounty of 26½c.

*Prices for Warren, Allen, Hancock, and Ohio Counties by Indian Refining Co. Prices for Warren and Simpson Counties by Paragon Development Co., same as Indian Refining Co.

Mexican Crude

*Tuxpam (f.o.b. Mexican ports)	$1.35
†Panuco (f.o.b. Mexican ports)	1.25
Tuxpam (New York)	1.99
Panuco (New York)	1.76

*Plus 33.00c tax. †Plus 20.00c tax.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, Feb. 10.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Chicago Dist.—				
†100 gals. or more	16.0	19.0	...	11.0

Tank wagon prices on April 19, 1922; g. up 1½c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 29, g. up 2c; Jan. 12, 1924, g. up 2c, k. up 1c; Feb. 5, g. up 2c, k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c.

Decatur, Ill.	16.2	18.2	...	11.5
East St. Louis	16.1	17.35	...	10.6
Joliet	16.4	18.4	...	11.7
Peoria	16.2	18.2	...	11.5
Quincy	16.2	18.2	...	11.3
Davenport, Ia.	16.5	18.5	...	11.9
Des Moines	16.5	18.5	...	11.9
Keokuk	16.5	18.5	...	11.9
Sioux City	16.0	18.0	...	11.5
Duluth, Minn.	17.5	19.5	...	12.6
Minneapolis	17.2	19.2	...	12.6
La Crosse, Wis.	17.2	19.2	...	12.4
Milwaukee	16.1	18.1	...	11.3
Madison	16.3	18.3	...	11.5
Detroit, Mich.	18.8	20.8	2.0	12.2
Grand Rapids	18.7	20.7	2.0	12.1
Saginaw	18.9	20.9	2.0	12.3
Evansville, Ind.	18.0	20.0	2.0	11.5
Fort Wayne	18.4	20.4	2.0	11.9
Indianapolis	18.2	20.2	2.0	11.7
South Bend	18.4	20.4	2.0	11.9
Fargo, N. D.	18.9	20.9	1.0	14.6
Huron, S. D.	20.0	22.0	2.0	13.1
Sioux Falls	19.5	21.5	2.0	12.6
*Kansas City, Mo.	18.9	20.9	3.0	10.3
*Springfield	18.8	20.8	3.0	11.2
*St. Louis	17.6	19.9	2.5	11.0
*St. Joseph	18.0	20.0	2.5	10.9
Wichita, Kans.	15.8	17.8	...	9.8
Bartlesville, Okla.	17.4	19.4	...	9.9

*State tax is 2c. Remainder is city tax.
†Tank wagon price on less than 100 gallons, 17c.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Newark, N. J.	19.0	21.0	...	13.0
Atlantic City	19.0	....	...	13.0
Annapolis, Md.	22.0	24.0	2.0	12.0
Baltimore	21.0	23.0	2.0	11.0
Cumberland	22.0	24.0	2.0	12.5
Washington, D. C.	21.0	23.0	2.0	12.5
Norfolk, Va.	23.0	25.0	3.0	13.5
Petersburg	23.0	....	3.0	13.5
Danville	23.0	....	3.0	13.0
Richmond	22.0	24.0	3.0	13.5
Roanoke	23.0	25.0	3.0	13.5
Keyser, W. Va.	21.0	....	2.0	13.5
Charleston	20.0	22.0	2.0	13.5
Parkersburg	20.0	22.0	2.0	13.5
Wheeling	20.0	22.0	2.0	13.5
Charlotte, N. C.	23.0	25.0	3.0	13.5
Hickory	23.0	....	3.0	13.5
Mt. Airy	23.0	....	3.0	13.5
Salisbury	23.0	....	3.0	13.5
Charleston, S. C.	23.0	25.0	3.0	14.0
Columbia	23.0	25.0	3.0	14.0

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
*Pittsburgh, Pa.	19.0	24.0	...	14.0
*Philadelphia	19.0	24.0	...	14.0
*Scranton	19.0	24.0	...	14.0
*Allentown	19.0	24.0	...	14.0
*Altoona	19.0	24.0	...	14.0
*Erie	19.0	24.0	...	14.0
Dover, Del.	21.0	24.0	2.0	14.0
Wilmington	21.0	24.0	2.0	14.0
Springf'ld, Mass.	21.0	25.0	...	13.0
Worcester, Mass.	21.0	25.0	...	13.0
Boston	21.0	25.0	...	11.0
Providence, R. I.	21.0	25.0	...	13.0
Hartford, Conn.	22.0	26.0	1.0	12.0
New Haven, Con.	22.0	26.0	1.0	13.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
New Orleans, La.	20.5	22.5	2.0	11.0
Alexandria	20.5	22.5	2.0	13.0
Baton Rouge	19.0	21.0	2.0	11.5
Lake Charles	20.5	22.5	2.0	13.0
Shreveport	20.5	22.5	2.0	13.0
Memphis, Tenn.	20.0	22.0	2.0	14.0
Chattanooga	21.5	23.5	2.0	14.5
Knoxville	22.5	24.5	2.0	15.0
Nashville	21.5	23.5	2.0	13.5
Bristol	23.0	25.0	2.0	13.5
Little Rock, Ark.	23.0	25.0	4.0	11.0

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Atlanta, Ga.	23.0	26.0	3.0	13.0
Augusta	23.0	26.0	3.0	13.5
Macon	23.0	26.0	3.0	14.5
Savannah	21.0	24.0	3.0	13.0
Birmingham, Ala.	21.0	24.0	2.0	14.5
Mobile	20.0	23.0	2.0	12.5
*Montgomery	22.0	25.0	3.0	15.5
Clarksdale, Miss.	21.0	24.0	3.0	12.0
Jackson	21.0	24.0	3.0	10.0
Natchez	20.5	23.5	3.0	11.5
Vicksburg	20.5	23.5	3.0	11.5
Jacksonville, Fla.	21.0	24.0	3.0	13.0
Miami	23.0	26.0	3.0	14.5
Pensacola	21.0	24.0	3.0	13.5
Tampa	21.0	24.0	3.0	13.0
Lexington, Ky.	21.0	24.0	3.0	14.0
Covington	18.0	21.0	3.0	14.0
Louisville	21.0	23.0	3.0	12.0

*In addition to the State tax of 2 cents on gasoline. Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosenes.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Dallas, Texas	15.0	19.0	1.0	11.0
Fort Worth	15.0	19.0	1.0	11.0
Houston	15.0	19.0	1.0	11.0
San Antonio	15.0	18.0	1.0	11.0
El Paso	17.0	20.0	1.0	12.0
Muskogee, Okla.	18.0	21.0	2.5	11.0
Oklahoma City	18.0	21.0	2.5	11.0
Tulsa	18.0	21.0	2.5	10.0
Ft. Smith, Ark.	21.5	24.5	4.0	12.0
Little Rock	23.0	25.0	4.0	11.0
*Texarkana	18.0	21.0	1.0	10.0

*Does not include 1c additional tax.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Casper, Wyo.	18.0	20.0	1.0	12.0
Cheyenne	19.5	21.5	1.0	13.5
Albuquerque, N. M.	22.5	25.5	1.0	13.5
Salt Lake, Utah	23.0	25.0	2.0	17.0
Denver, Colo.	19.0	21.0	2.0	13.5
Pueblo	19.0	21.0	2.0	13.5
Butte	21.0	23.0	2.0	15.0
Helena	23.0	25.0	2.0	16.0
Boise, Idaho	23.5	25.5	2.0	19.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Albany, N. Y.	21.0	....	...	13.0
*New York	21.0	....	...	13.0
Buffalo	21.0	....	...	12.0
Rochester	21.0	....	...	13.0
Syracuse	21.0	....	...	12.0
Boston, Mass.	21.0	....	...	13.0
Providence, R. I.	21.0	....	...	13.0
Augusta, Me.	22.0	....	1.0	13.0
Manchester, N. H.	23.0	....	2.0	13.0
Burlington, Vt.	22.0	....	1.0	13.0

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tank wagon price.

PACIFIC COAST DISTRICT

Standard Oil Co. of California

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
San Francisco	17.0	20.0	2.0	15.5
Los Angeles	15.5	18.5	2.0	15.5
Fresno	17.5	20.5	2.0	19.5
Reno, Nev.	20.5	23.5	2.0	19.0
Portland, Ore.	18.0	21.0	3.0	16.5
Seattle, Wash.	17.0	20.0	2.0	16.5
Tacoma	17.0	20.0	2.0	16.5
Spokane	21.0	24.0	2.0	20.5
Phoenix, Ariz.	23.0	26.0	3.0	21.5

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
All Ohio points	17.0	19.0	...	15.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Service station	Inclds tax of	Kero. Tank wagon
Omaha	14.0	16.0	...	11.50
Crawford	17.0	....	...	12.25
McCook	17.75	19.75	...	13.00
Norfolk	16.75	18.75	...	12.00
North Platte	17.75	19.75	...	12.75
Scotts Bluff	17.25	19.25	...	12.25

TANK WAGON CHANGES

February 4.—The Standard Oil Co. of Louisiana advanced gasoline tank wagon and service station 2 cents throughout its territory. The Standard Oil Co. of New York advanced its gasoline tank wagon and service station prices 1½ cents in New York and New England. The Magnolia Petroleum Co. advanced its tank wagon and service station prices on gasoline 1 cent in Oklahoma and Texas, except at Fort Worth, where the service station price was advanced 2 cents. The kerosene tank wagon price was advanced 1 cent in Texas. The Standard Oil Co. of California raised its gasoline tank wagon and service station prices 2 cents throughout its territory.

February 5.—The Continental Oil Co. advanced its gasoline tank wagon and service station prices 1 cent in Idaho. The Magnolia Petroleum Co. advanced its tank wagon gasoline prices 3½ cents and service station 2½ cents in Fort Smith, Ark., and both tank wagon and service station 2 cents in Little Rock and Texarkana.

February 6.—The Continental Oil Co. advanced its gasoline tank wagon and service station prices 2 cents in Utah and 1 cent throughout the remainder of its territory. The Standard Oil Co. of Kentucky advanced its gasoline tank wagon and service station prices 2 cents throughout its territory, except in Kentucky.

February 9.—The Standard Oil Co. of Kentucky advanced gasoline tank wagon and service station prices 1 cent in Kentucky, except in Louisville, while the service station price was advanced 2 cents. The Magnolia Petroleum Co. advanced the service station price 1 cent at Dallas, Texas.

CRUDE PRICE CHANGES

February 4.—The Standard Oil Co. of California advanced its prices for California crude 25 cents to 58 cents, making the top price 42° gravity, and above, $2.40.

February 5.—The Humble Oil & Refining Co. advanced the price for Mexia and Wortham, Texas, crudes 10 cents to $1.80.

February 6.—The Magnolia Petroleum Co. met the Humble advance in Mexia and Wortham. The Sinclair Oil & Gas Co. posted a 5-cent advance for the top gravity Mid-Continent crude, 41.6 degrees and above, making the price $2. The Prairie Oil & Gas Co. and The Texas Co. met the advance on their top grades of 42 degrees and above. The Texas Co. also posted a gravity schedule for the Wortham, Mexia, Powell, Richland and other East Central Texas fields, with prices ranging from $1.45 for crude below 32 degrees to $1.80 for crude testing 38 degrees and above.

February 7.—The Gulf Pipe Line Co., Magnolia Petroleum Co., Humble Oil & Refining Co., and others purchasers met the Sinclair advance of 5 cents in Mid-Continent crude.

FURTHER ADVANCE IN GASOLINE PRICES

(Continued from Page 20)

present time, as shown in the detailed report of Mid-Continent refinery operations as of February 1, which will be found elsewhere in this issue. This report shows that on February 1, Mid-Continent refiners were running 388,310 bbls. of crude oil to their stills.

Close students of statistical developments point out that this large refinery output in the Mid-Continent has already been reflected in slow markets in practically all products except gasolines. It was believed in the late fall that fuel oil, gas oil, distillates and kerosenes were certain to advance steadily throughout the winter months. Fuel oil especially occupied a strong statistical position but it has just been able to hold its own during the past month despite the fact that important advances in crude prices have developed during that period. Distillates also weaken after a short flurry in December, although the actual consumption of this product also greatly increased this winter.

Oversupply

In view of the uniform large consumption of all the major refined products, the only explanation that can be offered for certain present day market conditions is an oversupply. Gasolines have not been affected up to this time but with the years 1923 and 1924 in mind, many of the trade point out that this all-important product will also respond to fundamental conditions with a reactionary price trend unless the output is brought more in line with requirements of seasonal decline in consumption. It should also be remembered that it was the scramble for crude on the part of refiners both large and small to keep their refineries operating near capacity that brought about the crude advances.

This scramble for crude continues up to the present and other advances in crude are expected. Refiners have been more or less able to offset these crude advances with higher gasoline prices. A substantial part of their present gasoline output, however, is going to storage as it did last year and year before at this time and it will not be possible until later, when these stocks are sold, to determine just how profitable operations are at the present time.

Those who are warning refiners to "go slow" also have support in the fact that the crude advances announced have already been reflected in greater activity in the fields. Just what happens to the refined market in the final analysis will, of course, depend on the crude situation and refined market observers who want to gauge conditions over a period of several months look to the fields rather than refineries for their data. Just at present the crude market outlook is favorable. It is pointed out, however, that the discovery of one or more important light oil fields early in the year, due to this renewed activity on the part of the producers may change this situation at any time.

MID-CONTINENT REFINERY OPERATIONS
(Derived from Bureau of Mines Report)

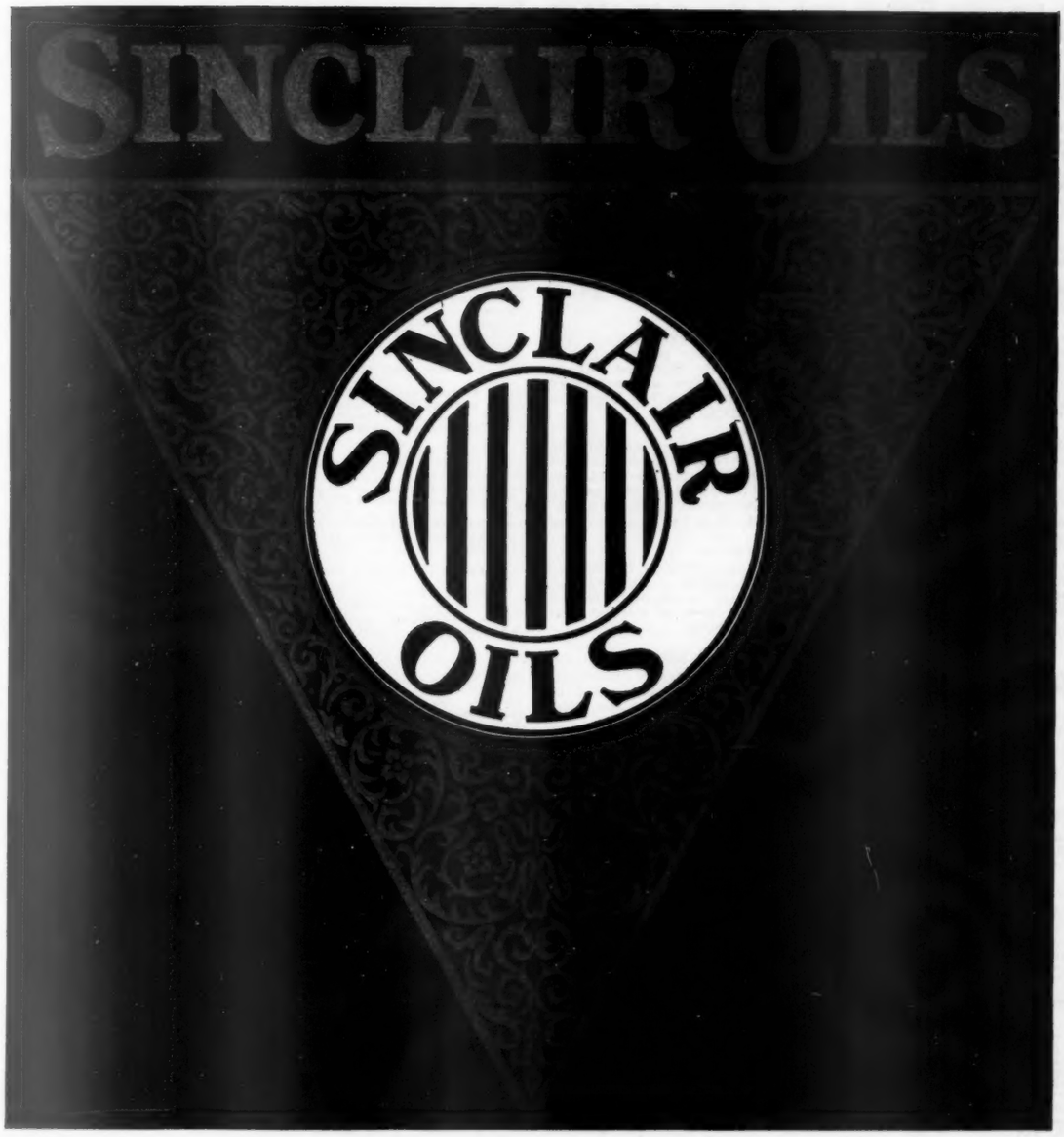
	No. of Plants	Av. Daily Crude Runs	Gaso. Stocks Jan. 1, '25	Kero. Stocks Jan. 1, '25	Fuel Oil Stocks Jan. 1, '25
Oklahoma-Kansas	61	264,061	121,042,101	32,115,612	132,458,641
North Central Texas	45	96,373	18,021,818	16,563,109	62,984,316
North Louisiana-Arkansas	13	36,215	4,907,134	1,193,190	15,722,171
Total	119	386,639	143,970,053	49,871,911	211,167,128

November

	No. of Plants	Av. Daily Crude Runs	Gaso. Stocks Dec. 1	Kero. Stocks Dec. 1	Fuel Oil Stocks Dec. 1
Oklahoma-Kansas	62	245,023	106,084,708	29,183,968	143,589,661
North Central Texas	43	91,766	14,764,397	14,880,023	64,460,854
North Louisiana-Arkansas	13	39,640	4,671,301	948,774	14,525,725
Total	118	376,329	125,520,406	45,012,765	222,566,239

October

	No. of Plants	Av. Daily Crude Runs	Gaso. Stocks Nov. 1	Kero. Stocks Nov. 1	Fuel Oil Stocks Nov. 1
Oklahoma-Kansas	62	227,744	107,337,922	25,873,245	122,136,772
North Central Texas	40	88,549	13,377,854	13,019,605	62,966,989
North Louisiana-Arkansas	13	38,235	3,499,350	1,011,651	14,637,145
Total	115	354,528	124,215,126	39,904,501	199,740,906



WHEN you see the Sinclair trade-mark, you are reminded of the Sinclair guarantee. A guarantee that Sinclair Oils are all you demand them to be. A guarantee that Sinclair Service is as good as your customers expect of you.

SINCLAIR REFINING COMPANY
New York: Sinclair Oil Bldg., 45 Nassau St. Chicago: 111 West Washington St.
Cable Address: "Lucent"

REFINERY STATISTICS FOR DECEMBER, 1924

Compiled by G. R. Hopkins

Petroleum Economist, United States Bureau of Mines

During the month of December the Bureau of Mines received reports from 284 refineries, with an aggregate daily crude oil capacity of 2,345,927 barrels, running to stills a daily average of 1,867,113 barrels of both foreign and domestic crude oil, or 79.6 per cent of their daily operating capacity, an increase of .3 per cent over the refinery operations of the previous month and an increase of 3.0 per cent over the operations of December, 1923.

December crude runs totaled 57,880,491 barrels, of which all but 3,306,378 barrels was domestic crude oil. This represents the greatest monthly total ever recorded, and is reflected in record production figures for the three main products, gasoline, kerosene and gas and fuel oils.

Gasoline

The production of gasoline during the month of December was 795,613,195 gallons, a daily average of 25,665,000 gallons, this latter being an increase of 1 per cent over the daily average of the previous month, and an increase of 20.7 per cent over that of December, 1923. Both total monthly and average daily production figures are the highest ever recorded. As was the case in 1922 and 1923, gasoline production reached its peak in the month of December.

Domestic demand or consumption for the month was 661,338,947 gallons, a daily average of 21,333,500 gallons. This represents a decrease in daily average consumption from the previous month of 8 per cent but is an increase of 27.6 per cent over the daily consumption of December, 1923. Total exports during December were 101,000,000 gallons, a slight increase over the total for November.

Stocks on hand increased 46,000,000 gallons during the month, standing at 1,179,503,185 gallons December 31, 1924. This was the first time since May that stocks have shown an increase. These stocks represent 55 days' supply at the December rate of domestic demand. This compares with 64 days' supply on hand a year ago and 48 days' supply on hand a month ago.

Kerosene

The production of kerosene during the month was 244,000,000 gallons, the highest monthly production ever recorded, and an increase over the previous month of 10,000,000 gallons. Exports and domestic demand both increased almost 20,000,000 gallons over the figures for November, hence stocks were not materially increased, as was the case during the previous month. The figure for December domestic demand, 156,000,000 gallons, was the highest since 1918.

Gas and Fuel Oils

The influence of increased runs to stills was noticeably felt in the totals for gas and fuel oils, "record" figures being once more recorded. December production and domestic demand were 1,199,000,000 gallons and 1,104,000,000 gallons respectively, both being record figures. Although domestic demand increased 91,000,000 gallons as compared to an increase in production of only 65,000,000 gallons, stocks were increased 30,000,000 gallons, standing on December 31, 1924, at a new high level of 1,671,000,000 gallons.

Lubricants

The production of lubricants during the month of December was 104,000,000 gallons, an increase over the previous month of 9,000,000 gallons. Exports and domestic demand both fell off during the month and stocks were increased 15,000,000 gallons to the highest level of the year, 257,000,000 gallons. It is of interest that stocks were at their lowest level for the year in the previous month.

Wax

The production of wax was 53,000,000 pounds, an increase of 10,000,000 pounds over the previous month. Exports and domestic demand both increased materially and stocks were reduced 3,000,000 pounds, standing at the close of the month at 90,000,000 pounds. Stocks of wax are now lower than at any time since the latter half of 1917.

Table of Operations by Divisions, December, 1924

Division—	Number of Plants Reporting	Daily Average Capacity Barrels	Daily Average Crude Runs Barrels	PerCt. Runs to Capacity December	PerCt. Runs to Capacity November
East Coast	18	457,000	357,508	78.2	81.3
Pennsylvania	49	86,620	60,423	69.7	68.9
Indiana and Illinois	24	171,600	163,145	95.1	96.8
Oklahoma and Kansas	61	335,400	254,051	75.7	73.1
Texas	59	429,080	393,175	91.6	88.2
Louisiana and Arkansas	18	151,740	137,362	90.5	93.4
Colorado and Wyoming	16	123,617	59,535	48.1	54.7
California	39	590,870	441,914	74.7	72.6
United States	284	2,345,927	1,867,113	79.6	79.3
Texas Gulf Coast	14	290,500	296,802	102.1	97.4
Louisiana Gulf Coast	5	112,100	101,147	90.3	92.1

The differences between the November and December capacities are explained as follows: East Coast, capacity increase 1,000; Indiana and Illinois, capacity increase 1,500; Oklahoma and Kansas, one plant shut down, capacity 1,500; Texas, one plant resumed operations, capacity, 2,500, one plant resumed reporting, capacity 1,800; Colorado and Wyoming, one plant shut down, capacity 1,000; California, one plant shut down, capacity, 3,000, capacity increase 365; one plant added to those reporting, capacity 12,000, four plants resumed reporting, capacity 17,135.

Comparative Analysis for December, 1924

Gasoline—	Production	*Imports	*Exports	Stocks End of Period	Domestic Demand
December 1923 ..	659,168,606	25,100,102	76,110,312	1,074,899,650	518,306,120
October 1924	760,646,784	9,113,348	95,492,579	1,152,374,237	751,499,199
November 1924 ...	762,046,475	11,958,267	97,851,124	1,133,168,656	695,359,199
December 1924 ..	795,613,195	13,458,589	101,398,308	1,179,503,185	661,338,947

BIG INCREASE IN OKLAHOMA PRODUCTION

(Continued from Page 28)

Judson Oil Co., (N. T. Gilbert, Receiver), Tulsa	2 247
K	
Kahle, Clyde, Cyril	1,625
Kano Oil Co., Nowata	130
Kanola Oil & Refining Co., Tulsa	1,035
Kanola Oil & Refining Co., L. L. Hutchison Trustee, Tulsa	2,494
Kansas-Oklahoma Consolidated Oil Co., Minneapolis, Minn.	730
Karnes, H. E., Independence, Kan.	61
Katy Oil & Gas Co., Bartlesville	1,104
Kaw Pet. Co., Tulsa	105
Kay & Klowa Oil Co., Tulsa	30,585
Kay County Gas Co., Ponca City	322,084
Kay Oil Co., Blackwell	208
Keener Oil & Gas Co., The, Tulsa	38,184
Keeter, J. A., Atlanta, Ga.	630
Keith, J. H., Coffeyville, Kan.	190
Keller, Will, Agent, Nowata	27
Kelley, B. F., et al, Tulsa	247
Kelley, Elnora B., Tulsa	385
Kennedy, H. W., Tulsa	657
Kennedy, J. L., Estate, Tulsa	161
Kennedy, J. L. & S. G., Tulsa	2,236
Kennedy, S. G. et al, Tulsa	451
Kerull Oil Co., Tulsa	3,198
Kewanne Oil & Gas Co., The, Titusville, Pa.	160,277
Keys Oil Co., Independence, Kan.	269
Keystone Oil & Gas Co., Independence, Kan.	236
King Brothers, Okmulgee	3,995
King, Frank, Okmulgee	30
King & Harrington, Tulsa	310
King, John, Receiver, Tulsa	59,138
King Phillip Oil Co., New Bedford, Mass.	219
Kingsbury, C. W., Tulsa	1,109
Kingwood Oil Co., Okmulgee	268,583
Kinney, George W., Tulsa	1,109
Kinney, George W., Trustee, Tulsa	1,928
Kinney-Wood-McIntyre, Tulsa	302
Kirk Oil Co., Ardmore	34,399
Kirkwood & Kennedy, Tulsa	338
Kistler, Ernest L., Tulsa	1,044
Knaell, J. C., Tulsa	73
Knappenberger, D. L., Sapulpa	151
Knappenberger, W. E., Tulsa	151
Knickerbocker Oil Co., Tulsa	2,321
Knupp Oil Corp., Warren, Pa., Higrade Pet. Corp., Tulsa, J. J. Lubell, New York, N. Y.	1,142
Kohlenberg, W. C., Sapulpa	88
Kunkel, W. A., Bluffton, Ind.	301
L	
Lackawanna Producing & Refining Corp., Scranton, Pa.	694
Lahman-Bell Oil Co., Dewey	600
Lambert, E. J., Tulsa	4,038
Lambert Oil & Gas Co., Tulsa	8,632
Lamberton, J. S., Tulsa	448
Lamberton, W. J., Estate, Tulsa	89
Lancaster & Grimes, Tulsa	411
Landon, A. M., Independence, Kan.	9,671
Lane Oil Prod. Co., Chicago, Ill.	3,997
Lane, E., Nowata	2,672
Large Oil Co., Bartlesville	3,094
Larkin Oil Co., Tulsa	113
Larkin, J. J., Tulsa	988
Lasoya Oil Co., Altoona, Pa.	1,452
Lathrop, Joe, Ardmore	3,334
Laurel Oil & Gas Co., Tulsa	405,456
Lawson, E. B., Nowata	76,169
Lawson & Griffin Producing Co., Nowata	266
Lawson & Reed, Nowata	514
Lawson & Whitehill, Nowata	2,482
Lawton Corporation, Okla. City	1,249
Layton Oil Co., Tulsa	497
Lea, M. W., Tulsa	403
Lea Drilling Co., Tulsa	1,033
Leahy Oil Co., Tulsa	2,730
LeBow, C. H., Tulsa	853
LeBow, R., Tulsa	32
LeFever, M. M., Marietta, Ohio	507
Lennox Oil & Gas Co., Lennox, S. D.	499
Lenox Oil Co., Okmulgee	25
Leonard Pet. Co., Washington, Pa.	786
Leonard, J. M., Joplin, Mo.	1,502
Leopold & Brett, Muskogee	228
Lesh, J. C., Guthrie	1,115
Letson Oil Co., Dewey	177
Levant Oil Co., Ardmore	16,749
Levant Oil Co. & Shaner Drilling Co., Ardmore	271
Levy, I. B., Trustee, Okla. City	2,969
Lewis Oil Co., Pittsburgh, Pa.	22,447
Liberty Oil & Gas Co., Warren Pa.	4,537
Lightning Creek Oil & Gas Co., Wellsville, N. Y.	613
Lima Oil & Gas Co., Bartlesville	4,790
Lincoln Oil & Gas Co., Tulsa	3,290
Link Oil Co., The, Tulsa	32,229
Little Fay Oil Co., Tulsa	13,651
Livingston Oil Corp., Tulsa	1,947
Loar, W. N. & Co., Okmulgee	2,250
Local Oil Co., Warren, Pa.	919
Lomore Oil Co., Ardmore	8,000
Lone Star Gas Co., Dallas, Tex.	29,010
Long, A. Y., Tulsa	34
Long, J. C., Okmulgee	206
Lorbeer, C. C., Cleveland	2,000
Lorraine Pet. Co., Tulsa	431,398
Louisiana Oil Refining Corp., Shreveport, La.	5,000

Products—	Gasoline Gallons
East Coast	204,437,819
Pennsylvania	26,672,169
Indiana and Illinois	159,148,566
Oklahoma and Kansas	121,042,101
Texas	154,414,955
Louisiana and Arkansas	85,975,454
Colorado and Wyoming	115,836,469
California	311,975,652
United States total	1,179,503,185
United States total 12/23	1,074,899,650
Texas Gulf Coast	1*e 393,137
Louisiana Gulf Coast	81,068,320

Stocks of Crude Oil and Refinery Products in the United States, December 31, 1924

Products—	Barrels
Crude oil	40,610,856
Kerosene	29,945,460
Gas and fuel oil	263,322
Lubricants	74,113,610
Wax	64,909,000
Coke	10,795,630
Asphalt	6,907,902
Other finished products	45,411,619
Unfinished products	4,599,136

Runs to Stills and Output of Refineries in the United States—December, 1924

Barrels	Crude Oils Domestic	Crude Oils Foreign	Unfinished Oils Domestic	Unfinished Oils Foreign	Natural Gas Gasoline	Total Oils Run to Stills
East Coast	9,036,951	2,045,805	466,779	122,311	276,881	11,937,727
Pennsylvania	1,873,120	.....	77,042	.....	36,794	1,986,956
Indiana and Illinois	5,057,495	.....	67,299	.....	81,816	5,206,610
Okla. and Kansas	7,875,589	.....	289,463	.....	222,389	8,387,441
Texas	11,592,690	595,718	336,695	29,173	311,493	12,865,769
Louisiana and Ark.	3,593,367	664,855	116,302	118,139	32,618	4,525,281
Colorado and Wyo.	1,845,582	.....	632,640	.....	45,152	2,523,375
California	13,699,318	.....	599,931	.....	223,286	14,522,535
United States total	54,574,113	3,306,378	2,575,151	269,623	1,230,429	61,955,694
Daily average 12/24	1,760,455	106,657	83,069	8,697	39,691	1,998,571
Daily average 12/23	1,542,446	110,749	.....	13,966	14,122	.....
Texas Gulf Coast	8,605,159	595,718	233,439	29,173	283,068	9,736,557
La. Gulf Coast	2,470,688	664,855	39,189	118,139	.....	3,292,871

Output and losses—	Gasoline Gallons	Kerosene Gallons	Gas and Fuel Oils, Gallons	Lubricants Gallons	Wax Pounds
East Coast	140,061,964	55,968,168	229,368,856	30,528,324	19,876,000
Pennsylvania	29,123,065	12,792,923	17,136,401	14,914,981	7,811,250
Indiana and Illinois	109,259,860	17,926,837	59,865,931	9,643,353	8,115,997
Oklahoma and Kansas	152,707,819	36,798,778	133,750,245	7,506,610	4,237,465
Texas	171,860,342	57,461,810	231,326,419	26,813,539	5,164,507
Louisiana and Arkansas	45,776,721	21,531,019	88,629,979	2,258,277	3,663,436
Colorado and Wyoming	41,237,202	6,761,060	36,613,327	1,602,588	3,869,469
California	105,484,218	34,591,222	402,402,077	11,123,424	.....
United States total	795,613,195	243,831,817	1,199,093,235	104,391,096	52,959,124
Daily average, 12/24	25,664,942	7,866,542	38,680,427	3,367,455	1,706,133
Daily average, 12/23	21,263,503	7,578,113	34,623,776	3,153,151	1,421,942
Texas Gulf Coast	127,337,713	48,183,981	169,596,867	25,051,422	4,903,737
Louisiana Gulf Coast	36,369,592	18,350,960	83,869,819	1,958,271	3,653,436

	Coke Tons	Asphalt Tons	Other Finished Products Gallons	Unfinished Products Gallons	Losses Barrels
East Coast	13,968	86,946	1,707,525	4,278,131	308,591
Pennsylvania	1,036	37	1,407,229	1,497,502	122,595
Indiana and Illinois	21,346	11,886	5,067,193	1,871,103	146,196
Oklahoma and Kansas	6,684	.....	632,079	5,598,438	385,515
Texas	17,895	24,410	194,913	27,045,560	382,342
Louisiana and Arkansas	10,258	36,908	6,066,652	10,970,737	78,098
Colorado and Wyoming	3,331	1,350	38,018	14,612,400	76,933
California	.....	28,263	7,017,258	37,777,126	111,140
United States total	73,518	189,800	22,130,867	104,051,097	1,535,330
Daily average, 12/24	2,372	6,122	713,899	3,356,487	49,526
Daily average, 12/23	2,037	5,072	669,358	.....	51,062
Texas Gulf Coast	17,555	24,410	.....	17,199,708	287,203
Louisiana Gulf Coast	10,108	36,908	6,066,652	7,778,638	59,449

Stocks at Refineries in the United States, December 31, 1924

Oils to be run to stills, Barrels	Crude oils Domestic	Crude oils Foreign	Unfinished Oils Domestic	Unfinished Oils Foreign	Total Oils To Be Run to Stills
East Coast	8,229,613	1,461,978	5,483,533	67,524	15,243,648
Pennsylvania	1,306,613	.....	830,898	.....	2,136,511
Indiana and Illinois	1,762,203	.....	2,123,449	.....	3,885,652
Oklahoma and Kansas	5,457,406	.....	1,575,834	.....	7,033,240
Texas	6,146,908	358,309	4,155,738	13,113	12,674,068
Louisiana and Arkansas	4,930,301	1,473,687	1,662,757	182,685	7,249,430
Colorado and Wyoming	957,397	.....	1,663,759	.....	2,621,156
California	12,720,921	.....	*10,449,587	.....	23,170,508
United States total	40,610,856	3,293,972	29,945,460	263,322	74,113,610
United States total 12/23	29,756,235	3,503,188	31,355,417	194,240	64,909,080
Texas Gulf Coast	4,837,327	358,309	5,586,281	13,113	10,795,630
Louisiana Gulf Coast	3,763,116	1,473,687	1,488,414	182,685	6,907,902

*Includes 7,845,961 barrels of tops in storage.

Barrels	Kerosene Gallons	Gas and Fuel Oils Gallons	Lubricants Gallons	Wax Pounds	Coke Tons	Asphalt Tons	Other Finished Products Gallons
East Coast	71,088,660	204,768,904	90,327,863	33,091,535	12,745	48,996	6,594,049
Pennsylvania	12,759,478	21,816,659	34,238,605	18,495,646	554	198	1,892,062
Indiana and Illinois	35,916,342	35,416,704	25,447,702	10,945,539	8,203	4,216	11,630,647
Oklahoma and Kansas	32,115,612	132,450,640	16,530,703	3,914,476	20,136	93	1,370,597
Texas	98,659,616	278,126,726	57,805,881	8,388,395	30,616	10,303	387,599
Louisiana and Arkansas	36,883,611	127,695,644	6,751,809	8,711,405	15,071	11,628	13,398,043
Colorado and Wyoming	9,203,990	21,093,527	5,559,873	6,105,743	10,519	4,811	388,870
California	42,198,470	849,140,134	20,673,802	13,670	.....	15,470	595,019
United States total	338,825,779	1,670,508,938	257,336,238	89,666,408	97,844	95,714	34,990,655
United States total 12/23	283,195,667	1,516,034,711	242,785,070	164,706,430	26,264	114,670	45,411,619
Texas Gulf Coast	82,096,507	215,142,337	56,990,452	8,164,859	30,336	10,303	.....
Louisiana Gulf Coast	35,690,421	111,973,474	6,073,299	8,711,405	14,250	11,628	4,599,136

Love, L. H., Ardmore 5,834
Lovell, Dot L., Marietta, Ohio .. 1,445
Lovell, J. L., Marietta, Ohio 613
Lovell Oil Co., Nowata 1,592
Lovett & Barnes, Robinson, Ill. .. 335
Lowrie & Barnes & Titus, Muskogee. 3,484
Lowrie, Barnes & Titus, Robinson, Ill. 1,766
Lowry Oil Corp., Muskogee 3,484
Lucky-Leaf Oil & Gas Co., Blackwell 1,122
Lucky Scott Oil & Gas Co., Independence, Kans. 2,547
Ludey, Charles A., Marietta, Ohio 3,317
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Lyon-Leonard Oil Co., Los Gatos Cal. 57
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Lyons, Pet. Co., Denver, Colo.... 15,229

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Maire Brothers & Ebling, Bartlesville 2,754
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Margulies, Larry J., Tulsa 1,380
Marietta Oil Co., The, Marietta, Ohio 2,425
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Steuben Oil Co., Tulsa 1,109
Stewart, C. E., Independence, Kans. 483
Steyner Oil Co., Bartlesville 20,811
St. Germain, R. J., Tulsa 1,487

(Continued on Page 128)

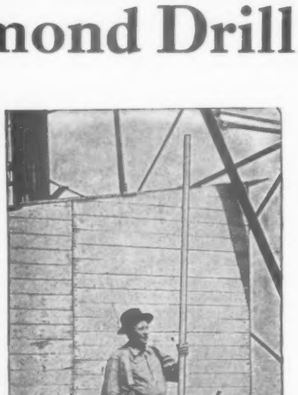
Alcorn Pool Found by the Diamond Drill

Near the Tonkawa field in Oklahoma, a test well bored where the surface indications "Looked good," stopped at 3400 feet without striking commercial production.

BUT STRUCTURE DRILLING with the Sullivan diamond drill picked up markers at several points on the acreage. Geologists drew a map. The "high point" was charted, and 1½ miles from the dry hole a well came in at 2066 feet with 200 barrels natural.

The "ALCORN" is only one of several new Mid-Continent fields being developed with the aid of Sullivan diamond drills.

Send for booklet "Structure Testing and Diamond Drills."



Sullivan Machinery Co.

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Geo. E. Failing, Agent for Oklahoma, Garber and Tulsa

Fulton House-Service Regulator

Equipped with a highly efficient spring valve which automatically reduces high intake pressures to any desired degree. Its strong feature is the valve seat which our catalogue fully explains. Send for your copy today.

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Arkansas to Present Its Part in Oil Before El Dorado Meeting

EL DORADO, Ark., Feb. 9.—The Arkansas Petroleum Club, consisting of 300 members, representative oil men in Arkansas, jointly with the Mid-Continent Oil & Gas Association, Louisiana-Arkansas division, will have a meeting at El Dorado, Arkansas, on February 18. Application has been made for reduced railroad rates from Arkansas, Louisiana, Texas and Oklahoma. The speakers will include J. Edgar Pew, president, American Petroleum Institute; Capt. J. F. Lucey, D. E. Buchanan, president Natural Gasoline Manufacturers Association, Pat Malloy, H. C. Couch, president Arkansas Light & Power Co., Charles F. McCain, president Bankers Trust Co., Little Rock. Efforts are being made to have the addresses broadcast on the radio. Mr. Pew's address will be of importance to every oil man in the country.

Plans are perfected to take care of 1,000 visitors, if necessary. The presidents of the Western Petroleum Refiners & Mid-Continent Oil & Gas Association have been invited , also President Baldwin of the Missouri-Pacific Railway. This is the first time Arkansas has endeavored to present its important part on oil matters. The arrangements are in charge of Victor H. Smith, president of the Arkansas Petroleum Club and vice president of the Mid-Continent Oil & Gas Association.

LUBRICANTS UNDER OXIDIZING TESTS

(Continued from Page 117)

oil represented by a similar physical condition. Hence we may not unfairly compare it with an oil homogeneous in nature; a similar oil, say, so far as initial physical properties are concerned, but one which has not yet begun to decompose—a more stable oil.

First to Break Down

Now consider these two types of oil under conditions of boundary lubrication, where we have the thinnest film possible before rupture and final seizure occur. In short, we have oils that have suffered to a greater or lesser extent by atmosphere and temperature, and we are now considering them under high speeds and heavy loads. Which film will break down first? It would seem to the author that the oil in a state of separation due to decomposition would be the one most likely, because we have gaps between them long before molecular dimensions are arriced at, but accurate experimental evidence on this point has so far been difficult to get. When seizure does occur, such a mess generally results that that it is difficult to get at the real cause, but experiments are in hand to see how far the constitution of the film is responsible. It is very probable that any views that apportion the cause or even part of the cause, to the constitution of the film of lubricant may be met with scant respect by many engineers. The automobile engineer has a "hardware" theory for seizure. He puts it down to:

(1) Bits of metal worn away from moving parts;

(2) Bits of metal left in the engine during assembly;

(3) Road dirt;

(4) The fact that by the failure of some mechanical device the oil does not get to its bearing.

There must, or course, be a final film in the case of (4), but this is often overlooked.

Where Failures Occur

There is no need of course to contest the statement that any of the above effects would tend to cause seizure, as may also bits of carbon washed away from the piston head, but the examination of oils from certain engines in which seizure has occurred has sometimes ruled out the operation of any of the above. Over and above these causes, therefore, there seems reason to believe that failure has occurred by virtue of the fact that the lubricant has broken down, mainly on account of its heterogeneous nature. In particular, it may be mentioned that on two occasions, when failure occurred in the same engine, every evidence pointed to the unsuitability of the oil. Each time the oil, when examined, was forming asphaltenes, notwithstanding the fact that each time it was comparatively new. Both the oil and the engine were reasonably clean so far as extraneous matter was concerned. It would appear that this aspect of lubrication is worthy of some attention.

It is therefore submitted that the oil that suffers the least loss, and that can be maintained a length of time at elevated temperatures without showing signs of decomposition, is the one most suitable for use in high speed engines. It best resists the join influence of temperature and atmosphere, and it is probable that under heavy loads it maintains a film least liable to rupture. Friction losses are diminished, and the "miles per gallon" are increased.

To discuss the refining of oils is not within the province of this paper. The engineer does not worry his head about what the oil contains, so long as it will fulfil its functions, and fulfil them well. In short, he takes the oil as the finished article, and he must judge it on its merits as such. Its constituents must therefore be selected by the oil refiner in such a way that his supplies stand up to the conditions previously adumbrated, and he must leave no stone unturned to endeavor to give the engineer those oils of great stability which the future will assuredly demand.

In conclusion, it must be said that only those types of oils sold as straight mineral oils have been considered in these notes. The castor and sperm blended oils are therefore excluded.

OIL BOARD SENDS OUT NEW QUESTIONNAIRE

(Continued from Page 23)

Munn, N. J., Cosden Building, Tulsa, Okla.

Naramore, Chester, Sinclair Consolidated Oil Corp., 45 Nassau, New York City.

Ohern, D. W., 515 West Fourteenth Street, Oklahoma City, Okla.

Oliver, Earle, Ponca City, Okla.

O'Neal, F. E. geologist, Pan American Oil Co., Taft, Cal.

Pack, R. W., Sun Co., Beaumont, Tex.

Perdew, W. E., Derby Oil Co., Wichita, Kans.

Phillips, T. W., Jr., president, T. W. Phillips Gas & Oil Co., Butler, Pa.

Powers, Sydney, box 2022, Petroleum Building, Tulsa, Okla.

Pratt, Wallace E., Humble Oil & Refining Co., Room 912, Humble Building, Houston, Tex.

Shaw, E. W., 11 Taylor Street, Chevy Chase, Md.

Skelly, W. G., president, Skelly Oil Co., Tulsa, Okla.

Swigart, T. E., Shell Co. of California, Higgins Building, Los Angeles, Cal.

Templeton, R. R., Union Oil Co., Los Angles, Cal.

Thompson, Arthur W., president, Philadelphin Co., 435 Sixth Avenue, Pittsburgh, Pa.

Tickell, F. C., Leland Stanford University, Palo Alto, Cal.

Umpleby, J. B., 710 Chautauqua Avenue, Norman, Okla.

Uren, Lester C., University of California, Berkley, Cal.

Van Waterschoot van de Gracht, W. A. J. M., Marland Refining Co., Ponca City, Okla.

Wagy, Earl, Standard Oil Co. of California, San Francisco, Cal.

Wagemann, C. H., Midwest Refining Co., First National Bank Building, Denver, Col.

Washburne, C. W., 2 Rector Street, New York City.

Williams, W. A., geologist and mining engineer, acting president, White Oil Corp., 61 Broadway, New York City.

Winchester, Dean E., 607 E. & C. Building, Denver, Colo.

Wyer, S. S., Columbus, Ohio.

GULF COAST

(Continued from Page 109)

ed No. 1 Lawrence. The above list is more wells drilling than for the past six months in that old pool.

In the Markham Pool, the Rycade Oil Corp.'s No. 1 Gray is bailing at 3,275 feet, with 400 feet of oil standing in the hole. Same company's No. 2 Gray cored sand and lime at 2,320 feet.

At Pierce Junction, the Gulf Production Co.'s No. 11 Taylor is working over at 3,725 feet and Snowden & McSweeney's No. 8 Cain is preparing to work over.

At Blue Ridge, the Gulf Production Co. is drilling No. 7 Luscher and rigging No. 10 B. Blakely.

Two rigs are working over old holes in the West Columbia Pool and two locations have been made at Damon Mound. These two pools are in Brazoria County. In addition to The Texas Co.'s No. 1 Fisher, drilling at Barber Hill in Chambers County, S. J. Hindman and others' No. 1 Collier is drilling on the east side of the dome around 1,100 feet.

In the Humble Pool, Martin & Co.'s No. 1 Burt 50 acres bailed dry at 2,720 feet. John Deering is preparing to resume drilling No. 2 Bissonett, northwest of production, near the San Jacinto River. The Kane Production Co.'s No. 1 O'Bryan is rigging southeast of production. Marsailes Brothers' No. 1 Long, the Sun Oil Co.'s No. 28 River, S. A. Weed's No. 3 Conway and Elwood & Co.'s No. 1 Mason are all drilling.

Outside of the Pools

In Refugio County, the Pratt-Hewitt Co.'s No. 6, near Woodville, is a gasser. At Big Hill Dome in Jefferson County, the Houston Oil Co.'s No. 5 Staiti is drilling around 2,675 feet with No. 2 Gulf-Pipkin rigging to start.

In Brazoria County, the Bryan Production Co.'s No. 1 Chester set 6⅝-inch casing at 2,980 feet and is now drilling out the plug. Gayler and others' No. 1 Dunsmoor, 6 miles south of Angleton, is around 1,000 feet. The Gulf Production Co. is rigging No. 1 Gavin, 4 miles west of the town of Brazoria. Near the Brazoria-Fort Bend County line, 5 miles southeast of Damon Mound, the Rycade Petroleum Corp.'s No. 1 Meier is drilling at 725 feet, being in 85 feet of anhydrite. Same company's No. 1 Nash is at 2,235 feet. No. 2 Nash is below 3,150 feet. These tests are around what has come to be known as the Wisdom Dome, one of the saline discoveries of the seismograph.

Across in Fort Bend County, the Gulf Production Co.'s No. 3 Moore is at 866 feet. It, too, is on a location that followed the use of dynamite and the recording of temors by the seismograph. The Pathfinder Oil Co.'s No. 2 Davis is below 1,200 feet. It is likewise a formation test. The Neilan Oil Co.'s No. 1, 4 miles west of Rosenburg, is shut down at 1,200 feet. The deepest test in the county is the Gulf Coast Development Co.'s No. 3 Vogel, mapped Erie Townsite, drilling below 5,140 feet. It is being drilled by Kansas City and Mansfield, Ohio, men.

In Harris County, Geiske & Davis' No. 1 Malone, at North Houston, is drilling around 1,500 feet. The Trinity Copper Co. is preparing to resume drilling a test near Westfield, shut down around 3,500 feet. C. T. Rucker is rigging near the mouth of Cedar Bayou. The Texas Co.'s No. 1 Warren on the Hockley Dome, northwest of Houston, has been spudded in and No. 2 is starting. One will be a deep hole and one a shallow test.

In Matagorda County, the Marland Oil & Refining Co.'s No. 1 Murphy, 15 miles south of Bay City, is deepening at 4,655 feet. The Shepherd Mound Oil Co.'s No. 1 Hawkins, an offset, is drilling around 900 feet.

At High Island Dome in Galveston County, the Gulf Production Co.'s No. 2 Smith on the north side, is drilling around 2,600 feet. The Sun Oil Co. is rigging No. 2 Lockhart.

Lee F. Sprague and associates, of Hartford City, Ind., has a location for a test in San Jacinto County, at Derden bend on the Trinity River. The contract calls for a hole to be drilled to 3,500 feet. The same interests have a location west of Willis in Montgomery County. The Ridge Oil Co.'s No. 1 Eastham in Walker County is around 800 feet, drilling with cable tools.

Off the Boling Dome, in Wharton County, the Gulf Production Co.'s No. 3 Felder is drilling below 2,600 feet. Same company's No. 2 Cloud is around 1,500 feet.

South Louisiana

In the Vinton (Louisiana) Pool, the Gulf Refining Co.'s No. 60 G. N. G. is drilling around 1,800 feet. No. 27 Vincent is below 2,800 feet with No. 23 Vincent rigging to work over as is No. 23 Star. The Texas Co.'s No. 1-B Gray is drilling around 3,180 feet and No. 2-A Gray is rigging. The Vinton Petroleum Co.'s No. 6 Rescue is at 1,910 feet. No. 16 Harmony is at 765 feet. Marrs McLean's No. 5 Gray is working over at 3,350 feet. The Sun Oil Co.'s No. 3 Johnson is drilling below 2,415 feet. The Edgerly Petroleum Co.'s No. 3 Vincent is rigging up.

No producers were made in that pool during the week. The Gulf Refining Co.'s No. 34 Star was abandoned at 3,600 feet and the Edgerly Petroleum Co.'s No. 2 Lizzo went into rock salt at 3,700 feet and quit. The salt is deeper in the south Louisiana pools than in the south Texas. The Vinton Petroleum Co. abandoned No. 8 Harmony and is bailing No. 1 Vincent at 2,700 feet, after working it over.

In the Edgerly Pool, the Lake Charles Petroleum Co.'s No. 5 Fairchilds is a salt water hole at 2,820 feet. The Gulf Refining Co. got the same in No. 7 Bright-Penn at 3,200 feet. Both are workovers.

The Roxana Petroleum Corp.'s No. 1 Hunter there is drilling below 2,915 feet. G. W. Gray No. 1 Lillard is at 2,875 feet. The Gulf Refining Co.'s No. 36 Bright-Penn is rigging to drill deeper.

In the Jennings Pool, the Port City Oil Co.'s No. 2 S. F. S. went into salt water at 1,650 feet and is drilling deeper. Hines and others' No. 9 Martin is bailing at 1,625 feet.

The Coastal Fuel Co.'s No. 88 fee there is working over. Barden & Myers is rigging No. 11 S. C., The Texas Co. is rigging No. 37 Latrielle to work over and the Gulf Refining Co.'s No. 34 Jennings-Clement will be deepened.

In the Lockport district, near Lake Charles, Calcasieu Parish, the Vacuum Oil Co.'s No. 1 Farquhar is fishing for the bailer at 2,280 feet, where a sand showed oil. Same company's No. 1 Bordages is showing oil at 4,400 feet. The Marland Oil & Refining Co.'s No. 1 Clooney in that parish was abandoned at 4,225 feet.

Wildcats drilling in South Louisiana parishes include the following: In Cameron Parish, Pure Oil Co.'s No. 1 at 465 feet. In St. Mary Parish, Dannebaum's No. 1 Le Blanc, shut down at 2,065 feet and the Wild Glen Oil Co.'s No. 1 Pharr, drilling around 2,250 feet.

Southwest Fields

The best well to date in Jim Hogg County is Kesleman and St. Albans No. 3 Holbein Ranch, northeast of the discovery well, which came in credited with 3,000 bbls. original flow. It is expected to go off, if it follows the rule of previous wells there. The Magnolia Petroleum Co.'s No. 3 Thompson is a 350-bbl. well.

In the Laredo pools, the Texpata Pipe Line Co., Magnolia Petroleum Co., and Witherspoon Oil & Refining Co. have posted 85 cents, an advance of 10 cents, as a basis for contracts. The companies mentioned, together with the Swiftsure Petroleum Co. and the Sun Oil Co. are buyers of the Webb County crude. The Laredo refinery is a purchaser and the refineries at San Antonio are in the market from time to time.

Tank car shipments from Mirando City, the shipping point on the Mex-Tex Railroad, during January total 984 cars an increase of 164 cars over the December figures. Of the January total, 873 cars went eastward to Aransas Pass and 111 cars westward. Most of the consignments to Aransas Pass are loaded into barges there and brought through the Gulf to Texas City and Sabine Pass.

The runs of the Magnolia Petroleum Co.'s from the various Webb County pools and Jim Hogg during January were 50,864.22 bbls., which is the record.

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J. J. MAHONEY, President

KANSAS CITY, MISSOURI

BIG INCREASE IN OKLAHOMA PRODUCTION

(Continued from Page 125)

Stine, E. M., Tulsa	346
Stine, J. C., Tulsa	346
St. Louis-Alluwe Oil & Mining Co., St. Louis, Mo.	211
Stonor Brothers, Tulsa	143
Storer Oil Co., Sapulpa	7,396
Straight, Preston, et al, Bartlesville	2,050
Stralem, C. I., Tulsa	1,213
Striker, John H.	216
Strimple, J. A., Janesville, Wis.	262
Sturm, H. L., Ardmore	45
Sullivan, M. J., Kansas City, Mo.	65
Summit Oil Co. & Sand Fork Gas & Pet. Co., Bartlesville	749
Sunbeam Pet. Co., Tulsa	1,906
Superior Oil Corp., Lexington, Ky.	363,441
Suppes, G. B., R. E. & C. E., Tulsa	13,569
Suppes & Breslin, Tulsa	1,205
Sure Oil Corp (N. T. Gilbert Receiver), Tulsa	16,939
Sutherland Pet. Co., Ardmore	11,548
Swain, Guy, Bartlesville	166
Swanson, Fred, Estate, Chanute, Kan., & John Swanson, Chanute Kan., & Dan Kelly, Marietta Ohio	1,722
Swastika Oil Corp., Tulsa	480
Swastika Oil & Gas Co., Copan	38
Sweeney, J. F. & Co., Tulsa	13,451
Sweeney, J. F., Estate, Clara E. Sweeney, Administratrix, Tulsa	120
Sykes, C. E., Ardmore	2,077
T	
Taft Oil Co., The, Independence, Kan.	3,561
Taft, M. G., Garber	275
Tait, S. W., Montpelier, Ind.	464
Terrell Co., The, Terrell, Tex.	3,282
Terwilliger, C. H., Tulsa	2,237
Test Oil Co., Bradford, Pa.	4,830
Testlog Oil Co., Tulsa	682
Texas Co., the Prod. Dept. Tulsa	1,066,194
Texas-Oklahoma Inv. Co., Independence, Kan.	2,472
Texas Pacific Coal & Oil Co., Thurber, Tex.	105,854
Texmex Oil Co., Tulsa	1,308
Texokan Producing Co., The Coffeyville, Kan.	186
Thatcher, C. L., Trustee, Cleveland	25,200
Thatcher, C. I., Trustee, Clevelnad	25,200
32nd Oil & Gas Co., Ardmore	4,660
Thompson Oil & Gas Co., Tulsa	6,161
Thompson, J. H., Okmulgee	199
Thompson, J. N., Tulsa	768
Thompson, J. N., Wm. M. & Roy B., Tulsa	509
Thompson, W. M. & Roy B., Tulsa	1,082
Thompson, Welder & Neal, Cleveland	3,491
Thurmond, T. A., Ardmore	5,834
Thurvan Oil Co., Bartlesville	618
Tibbens, C. G., Tulsa	68,489
Tidal Oil Co., Tulsa	287,367
Tidal-Osage Oil Co., Tulsa	237,357
Tiger Mountain Oil Co., Tulsa	6,172
Title Guarantee & Trust Co.-J. K. & M. R. Putnam, Tulsa	440
Titus, C. W., Tulsa	4,791
Titus, C. W., et al, Tulsa	34,284
Todd, E. G., Cleveland	192
Toney, Mina H., St. Louis, Mo.	365
Trainer Oil & Gas Co., Bartlesville	460
Trainer, J. E. et al, Salem, W. Va.	384
Transcontinental Oil Co., Pittsburgh, Pa.	395,863
Traywick, N. E., Okmulgee	133
Trefts, John C., Buffalo, N. Y.	947
Troy Oil & Gas Co., Sapulpa	6,015
Trumbo, A. C., Muskogee	12
Tuloma Oil Co., Tulsa	312
Tulsa Co., The, Oklahoma City	11,373
Turman Oil Co., (N. T. Glibert & Julius M. Mayer, Receivers) Tulsa	54,114
Turner T. E. & T. C., Mounds	8,814
Tyler, D. M., Dewey	1,769
Tyler, H. F., & Associates, Dewey	400
Tyrrell, H. C., Tulsa	370
Tselos, George, Pawhuska	207
Twin Hills Oil & Gas Co., Tulsa	1,408
Twin State Oil Co., The, Tulsa	527,185
U	
Umburn, W. L., Weleetka	2,475
Union Drilling Co., Tulsa	282
United Central Oil Corp., Houston, Tex.	35,907
Upp, O. E., Tulsa	1,416
Upp, O. E. & Vick Oil Co., Tulsa	613
Upp, Walker, et al, Tulsa	1,262
Urschel, C. F., Oklahoma City	19,270
Urschel, Fiored S., Oklahoma City	19,270
V	
Vance, S. E., Tulsa	1,290
Van Dall Brothers, Bartlesville	1,717
Vandervoort & Hoss, Piatt	1,264
Vandivort, W. M., Nowata	413
Van Eman, G. L., Jennings	25,731
Van Horn, E., Chelsea	53
Van Horn, R. V., Trustee, Clifton Forge, Va.	800
Van Moss Oil Co., Bartlesville	1,039
Vensel, Elliott & Vensel, Tulsa	4,690
Verland Oil & Gas Co.-(N. T. Gilbert & Julius M. Mayer, Receivers), Tulsa	9,686
Vesta Oil & Gas Co., Kansas City, Mo.	67
Vicmar Oil Co., Tulsa	6,158
Vickers, Dan, Sapulpa	115
Vowell-Jackson, Sapulpa	7,098
W	
Wachob-Trumbo & McKay, Muskogee	68
Wade, J. C., Cement	250
Wagner, Norma, Fort Worth, Tex.	763
Wah-Sha-She Oil Co., Bartlesville	8,486
Wait, C. L., Los Angeles, Cal.	2,858
Waite, Fannie C., Los Angeles, Cal.	2,858
Waldo Oil & Gas Co., Carlisle, Pa.	9,590
Walker, P. G., Jr., & O. K. Eysenbach, Tulsa	398
Walker, W. L., Tulsa	80
Wall Oil Co., Tulsa	1,420
Wallace, F. H., Tulsa	956
Wallace, Harold, Bankrupt- Charles S. Lynch, Receiver, Ardmore	8,827
Wallace, J. E., Okmulgee	595
Walsh Oil Co., The, Tulsa	6,469
Ward Oil & Gas Co., Tulsa	3,072
Warner-Caldwell Oil Co., Titusville, Pa.	20,747
Warren Co., Bartlesville	2,121
Warren Oil Co., St. Louis, Mo.	312
Warwick, L. H., Trustee, Nowata	282
Washington, J. E., Tulsa	116
Watchorn Oil & Gas Co., Oklahoma City	256,288
Wayne Oil Co., Tulsa	3,154
Weart, J. Foss, Bartlesville	484
Webb, R. N., Tulsa	388
Weber, Howard No. 5, Bartlesville	2,684
Weber, Obins & Beattie, Bartlesville	722
Webster, G. W., Tulsa	1,845
Weis, Sigmund, Walters	101
Weible, H. C. et al, Coffeyville, Kans.	221
Welch Gas & Oil Co., Stillwater	780
Welch, J. N., Hominy	12
Welder, Myrtle, Est.-George W. Reynolds, Admr., Cleveland	41
Wells, N. D., Tulsa	1,189
Wellsville Oil Co., New York, N. Y.	2,933
Welsh, A. L., Oklahoma City	9,100
Welsh, Frank P., Rock Island, Ill.	303
Welsh, J. D., Kansas City, Mo.	451
Wentz Oil Corp., Ponca City	1,185,749
West, J. H., Tulsa	2,225
West, L. L., Tulsa	346
Westerly Oil Co., Bartlesville	3,108
Western American Oil Co., Bartlesville	1,944
Western Natural Gas Co., Tulsa	3,572
Western Oil Corp., Tulsa	11,544
Western States Oil & Land Co., The, Casper, Wyo.	2,066
Westheimer & Daube, Ardmore	153,072
Westland Oil Corp., Tulsa	10,133
White Eagle Oil & Refining Co., Wichita, Kans.	23,748
Whitehill, B. F., Tulsa	1,484
Whitehill, Donovan, Hayden & Whitehill, Tulsa	833
Whitehill, Donovan & Whitehill, Tulsa	1,042
Whitehill & Glass, Tulsa	1,305
Whitehill, Howard J., Tulsa	167
Whitehill, Smith, Shaw, et al, Marietta, Ohio	1,755
Whiteside, R. B., Duluth, Minn.	273
Whittier, M. H., Tulsa	4,399
Wickett, K. L., Tulsa	846
Wigton, B. L., Okmulgee	1,050
Wigton & Long Co., Okmulgee	28,500
Wilcox, H. E., Indianapolis, Ind.	89
Wilcox, H. F. Oil & Gas Co., Tulsa	196,780
Wilcox, H. G. & E. M. Oswalt, Tulsa	195
Wilcox, Oswalt & Wilcox, Indianapolis, Ind.	547
Wilhoit, Ethel J., Exec'x., & R. M. Jones, Trustee, Kansas City, Mo.	3,518
Wilhoit, J. C., No. 2, Kansas City, Mo.	591
Wilkinson, Eugene, Nowata	1,307
Wilson, J. H., Chicago, Ill.	197
Winemiller, J. H., Tulsa	313
Winona Oil Co. of Delaware, Tulsa	82,565
Winters Oil Co., Bradford, Pa.	903
Winters, M., Independence, Kans.	862
Wise & Jackson, Sapulpa	13,598
Wiser Oil Co., Bartlesville	94,504
Withington Oil Co., Dewey	1,053
Withington, Margaret M., Bartlesville	320
Wittmer Property, Trustees, Pittsburgh, Pa.	162,406
Wolfe Oil Corp., Bristow	15,352
Wolfe, E. C., Tulsa	735
Wolfe, F., Tulsa	191
Wolfe, Frank, Trustee, Tulsa	604
Wolverine Pet. Corp., St. Louis, Mo.	378,566
Wood Oil Co., Tulsa	34,583
Wood, T. J., Tulsa	12,051
Woodard-Burkett-Woodard, Nowata	1,562
Woodard, George E., Nowata	1,736
Woodard & Woodard, Nowata	799
Woodard & Woodard Tools, Nowata	35
Wren, Joseph M., Trustee, Tulsa	624
Wright, J. H., Sapulpa	3,773
Wright, W. T., Tulsa	168
Wright Drilling Co., Sapulpa	192
Wrightsman Pet. Co., Tulsa	12,153
Wylie, W. J., Bristow	2,800
Y	
Young, George L., Dewey	400
Young, Louise, Tulsa	152
Z	
Zahn & Crawford, Tulsa	2,831
Zola Oil Co., Tulsa	17,789
SUPPLEMENTAL	
Betty G. Petroleum Co., Cement	521
Cala Belle Oil Co., Cement	572
Carson, W. A., Oklahoma City	4,200
Cohn, M. M. & D., New York, N. Y.	116
Corbin Oil & Gas Co., Tulsa	2,071
Criswell, Georgia B., Haskell	625
Crockett, Elisabeth, Oklahoma City	24,122
Dekoma Development Co., Tulsa	379
Donnelly, J. E., Tulsa	220
Goble, B. G., Tulsa	1,134
Halden Oil Co., Tulsa	775
Harmon, W. J., et al, Okmulgee	11,025
Haubert, H. J., Tulsa	191
Hayner Petroleum Co., Tulsa	803
H. C. W. Oil Co., Chelsea	598
Henton, E. L., et al, Chelsea	2,488
Henton & Weible, Chelsea	689
Hoefer, C. C., Kansas City, Mo.	99
Holm, Martin H., Chicago, Ill.	140
Holmes, B. F. & Co., Lyons, Kans.	838
Holmes Oil Co., Lyons, Kans.	87
Johnston, T. A., Co., Okmulgee	750
Jordan, F. G., et al, Okmulgee	364
Kingsley, W. L., Kansas City, Mo.	283
Lane & Wasson Co., Ardmore	1,734
Lashley, Edmund, Tulsa	61
Louvain Oil Co., Bartlesville	1,860
McCullough, E. E., Muskogee	365
McOwen, Bernard, Estate, Buffalo, N. Y.	1,178
Merrick, Ward S., Ardmore	1,403
Midland Oil & Drilling Co., Oil City, P. A.	323
O'Connor, Dennis & Sara, Butler, Pa.	475
Oklahoma-Missouri Dev. Co., St. Louis, Mo.	84
Olsen, Amanda, Drumright	861
Osage-Arrow Oil Co., Ponca City	2,648
Penrod-Thompson, et al., Okmulgee	2,712
Redd Oil Co., Tulsa	149
Rogers, The A. H. Estate, Webb City, Mo.	923
Sargent, J. C., Tulsa	1,024
Scott, W. F., Kansas City, Mo.	394
Sheldon, Don, Muskogee	17
Siaco Oil Co., et al, New York, N. Y.	243
Smith & Steinberger, Tulsa	2,021
Stacy, Dean M., Oklahoma City	2,347
Steen, O. D., Oklahoma City	6,120
Steinberger, C. A., Tulsa	2,739
Sullivan, E. J. & W. C., Dickey, Bartlesville	959
Thompson-Jordon, et al, Okmulgee	2,498
T. O. Petroleum Co., Muskogee	593
Warner, W. W., Nowata	86
Warh-Okla Oil & Gas Co., Washington, D. C.	355
Wettack, Maude T., Nowata	265
Wilson, Hiram C., Tulsa	17,129
Wilson, M. A., Dewey	793
Zobar Oil Co., Tulsa	2,278
Total	46,970,149

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OSAGE LEASE SALE MARCH 18 APPROVED

WASHINGTON, D. C., Feb. 10.—Auction of leases on 56,000 acres of land in Osage County, Oklahoma, for oil exploitation was authorized today by Secretary Work of the Department of the Interior. Under an act of congress 100,000 acres must be offered during the fiscal year which expires April 8. Two sales since last April disposed of 44,000 acres.

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Say Bentonite Clay May Be Valuable in Filtering Processes

By F. B. Taylor

CASPER, Wyo., Feb. 7.—A peculiar clay found in the Rocky Mountain region is attracting the attention of experimenters in filters for oils. This clay is called Bentonite and while its filtering properties for the heavier oil products, such as the lubricants and greases, are still in doubt, it has the property of clearing low grade gasolines and kerosenes of the yellow color sometimes found in these and considered objectionable to the trade.

Bentonite is found in Wyoming and the adjoining States in the Benton formation, from whence it derives its name. The Benton series occur between the Niobrara and the Cloverly formations of the Colorado series, in the Cretaceous. This Benton formation also contains the Frontier, Mowry and Thermopolis strata.

Bentonite has been studied by several scientists of the Geological Survey as to its geological importance and it is used in medicine under the names of Denver Mud and Antiphlogistine as a plaster to relieve pain and for its vesicle effect in drawing suppurations.

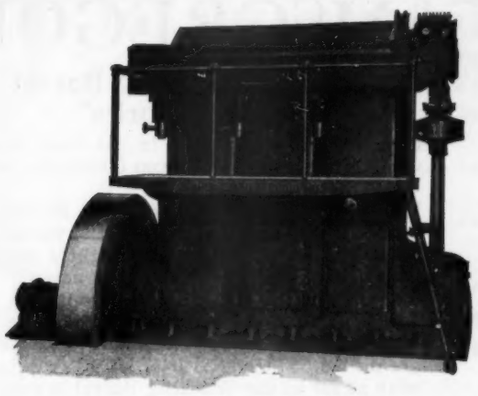
The clay lies in regular veins, from a few inches in thickness up to several feet, and is of a light buff color. It occurs in many parts of Wyoming, Montana and Colorado and has been found in Nebraska and the Dakotas. The wells in Salt Creek pass through several veins of it and it is surfaced in numerous places in the Big Horn Basin, especially near Cody, where veins 6 feet thick are reported. Recent tests have been made looking to the use of this clay in removing inks from paper and the results are reported successful so that news print and other papers can be re-used after a Bentonite treatment which retains the inks on the papers. Bentonite, on account of its porosity, has large absorbing properties. A lump of the clay will take more than its own weight in water and is used by people living in the mountains and away from the towns and cities as a substitute for soap, having peculiar cleansing properties.

The origin of Bentonite is still somewhat in doubt, but the authorities concede it comes from volcanoes as a dust of volcanic glass and probably settled on the great inland seas of prehistoric times. This would account for the continuity of its bedding in veins and also the fact that no quartz crystals are to be found in it. In most sedimentary clays and other deposits made by water, quartz is generally prominent as a constituent, but it is wholly absent in Bentonite. This clay also has the ability to absorb dyes in solution on account of its porosity.

At present, some experimenters in Wyoming are testing Bentonite as a possible filter for neutralizing the lighter oils obtained in distilling crudes. At present, gasoline and kerosene are treated in a high wash tower or tank, lead lined, and called an agitator, where the oil product is first mixed with sulphuric acid and then with caustic soda, until a neutral product is obtained and the particles of sludge are precipitated out of the oil. If the present experiments prove successful, this operation of refining will be changed materially. The lead lined agitators may be done away with as well as the use of sulphuric acid and soda and the oils will be treated much in the same manner as the lubricants are now filtered through Fullers' Earth.

WOMEN ORGANIZE OIL COMPANY

OKLAHOMA CITY, Okla., Feb. 7.—Pawhuska women are among the principal organizers of the recently incorporated Salt Fork Oil & Gas Co. at that place. Margaret S. Gay has been elected president and Lida Ade secretary. The capital stock is $60,000. Three leases in Kay County mad be had for stock, the application says.



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Oklahoma Inquiry On Gasoline Prices Now Awaiting Digest

OKLAHOMA CITY, Feb. 7.—Oklahoma refiners and marketers of gasoline have been requested by Attorney General George Short to report to him details of all deviations from standard tank wagon prices of gasoline made between August and December of last year. After these requests have been complied with and a digest is made of the information, Mr. Short will determine whether or not to proceed to prosecutions under the anti-discrimination law.

This was the first act of the attorney general after a hearing held in Oklahoma City, January 27, of representatives of over 300 manufacturers and marketers of gasoline. This hearing was informal and was based on numerous reports made to the attorney general of practices of discrimination. Mr. Short said he desired to do no concern any injustice and that the meeting was for a full and frank discussion of the matters complained of.

Admissions were made by several representatives of some of the largest concerns that tank wagon prices have been lowered in certain instances from the standard price of the day but that in each instance the reduction was made to meet competition. J. Berry King, assistant attorney general, who presided at the hearing, said the words "to meet competition" summed up practically all answers to questions put to witnesses as to individual price changes.

The attorney general has received from about 400 oil marketers the prevailing tank wagon prices on certain days in their several communities. These showed radical variations in some instances. One report showed that a wholesale marketer of gasoline sold to three customers in one town and three different prices one day. the difference between the lowest and highest being 2½ cents.

Maps presented by the investigation bureau of the State Department of Justice showed where gasoline was sold 200 miles from the point of manucfature at 3 cents a gallon under the price at the point of manufacture.

The hearing revealed that an intense fight for business is being carried on in all sections of the State, involving pump rentals, rebates through coupon books, consignment sales and barrel sales, and other trade practices in a keen competition extending down to the filling station operator. It covered many of the primary problems that have been brought for solution before the Oklahoma Oil Jobbers Association during the past several years. It ended with announcement of representatives of the leading concerns that they had no intention of violating the law and that they were willing to cooperate with the attorney general in correcting evils in the oil industry that are reflected in favors or losses to the consumer.

"There is no doubt," said Mr. King, "that many oil jobbers were unfamiliar with the law and if it was violated the act was not intentional. The public, of course, wants a uniform schedule of prices, and I believe the marketers want it. It may be that we can attain the ends sought without a fight. Mr. Short told those present he wanted all information required at hand and that if overt practices of discrimination were detected he certainly would prosecute."

The statute defines discrimination as "buying or selling such commodity or rendering such service at a lower rate in one section, community or city than in another, or at the same rate or price at a point away from that of production or manufacture after making due allowance for the difference, if any, in the grade, quality or quantity and in the actual cost of transportation from the point of production or manufacture, if the effect or intent thereof is to establish and maintain a virtual monopoly hindering competition or in restriction of trade."

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RUSSIAN OIL DIRECTOR WRITES OF U. S. TOUR

A. P. Serebrowsky, director of the operating oil industry in Russia, who visited Tulsa and the American fields last summer and fall, has embodied the information he gathered in a book, "The American Oil and Gas Industry," which is published in Russian by Arcos, Ltd., 49 Moorgate, London, E. C., 2. It is a bulky volume of 353 pages and 216 illustrations showing, besides scenes in the American fields, the eqiupment used in this country in the producing and refining of oil, together with 38 diagrams.

It will offer those engaged in the oil industry in Russia a comprehensive study of American oil fields and refinery practice. Mr. Serebrowsky deals in turn with the cable rig, the rotary and coring, casing and pipe, fishing methods, records of drilling costs, and control of production. Pumping methods are given particular attention. Gas also engaged the author's interest as shown by the inclusion of layouts of a compression plant at Garber and an absorption plant at Burbaux, Okla.

NEW MARKETING MANAGER

S. C. Cameron, formerly associated with the Cameron Oil Co. of Tulsa, has been placed in charge of the new marketing division of the Noble Oil & Gas Co. with headquarters in Tulsa. The Noble Co. has a refinery at Burkburnett, Tex., with natural gasoline plants both in Texas and Oklahoma. The marketing division will be under the direction of W. J. Schnur who will have general supervision of all sales. Mr. Schnur is recovering from an operation performed two weeks ago at Oklahoma City, Okla. He expects to leave the hospital in a few days.

SELLS BRADFORD LEASE

BRADFORD, Pa., Feb. 7.—The oil lease at Bingham, formerly owned by F. M. Johnston, has been sold to the Associated Producers Co. The property comprises about 1,196 acres on which are located 119 producing wells. It is considered one of the most valuable oil properties in the field.

DEPARTMENT OF THE INTERIOR, UNITED STATES LAND OFFICE, BATON ROUGE, LOUISIANA

Notice is hereby given that the following described land in the Caddo oil field, Caddo Parish, Louisiana, is offered for oil and gas lease under Sec. 17 of the act of February 25, 1920 (41 Stat., 437), at the standard royalty fixed for departmental leases varying from 12½ to 23⅓% of the oil produced, depending upon daily production per well, subject to reduction at discretion of lessor when average daily production of any well shall not exceed ten barrels per day; and 12½ to 16⅔% of casing-head gasoline, and an annual rental of $1 per acre, payable in advance, which will be credited against royalties as they accrue for that year.

TRACT A: Lot 4, Sec. 5, (14.10 acres), T. 20 N., R. 16W. There is a well situated upon this tract which has had a settled production of about ten barrels of oil per day for several years. By use of vacuum pumping a considerable volume of casing-head gas is being produced. This tract will be sold subject to a satisfactory guarantee by the successful bidder that he will immediately furnish and supply to said well satisfactory vacuum connection. Further guarantee as to a water supply will be required. This well is equipped with all machinery necessary to its operation, having an estimated value of $2000. This machinery is now the property of the United States and all bids are to be accepted subject to payment of the appraised price for machinery, an inventory of which may be seen on day of sale.

Said tract will be offered for sale at public auction at the Federal Court Room, Post Office Building, Shreveport, Louisiana, at 10 A. M. on March 10, 1925, and sold to the qualified bidder offering the highest bonus at the stated royalty. The successful bidder must deposit on day of sale a certified check upon a solvent bank or cash for one-fifth of the amount of each bid, and file the showing of qualifications to receive a lease as required by Sec. 15 of circular 672 oil and gas regulations, as to citizenship and ownership in other permits and leases. The remaining four-fifths of the bid must be paid upon issuance of lease. Plat showing location of tract offered and circular 672 may be secured from the U. S. land office, Baton Rouge, Louisiana, or General Land Office, Washington, D. C.

The bidders are warned against violation of the provisions of Sec. 59 of the U. S. Criminal Code, approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders.

The right is reserved to reject any or all bids in the discretion of the Secretary of the Interior.

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Inert Gas Is Used Instead of Steam in Distillation Tests

The idea of distilling petroleum by the aid of steam is an old one, as a patent embodying this idea was taken out over 50 years ago. But the employment of inert gas as a substitute for steam in petroleum distillation appears not to have occurred to anyone until Friedmann used natural gas as an aid to petroleum distillation in Argentina. But Friedmann's object was to use gas to aid the distillation of the low-boiling fractions, and his method of separating the hydrocarbons from the natural gas used was to employ activated carbon to absorb them.

In Brennstoff und Chemie L. Gurwitsch and B. Kamminer describe the results of some experimental work carried out by them which had for its object the distillation of the lubricant fractions of crude oil after the lighter fractions had been removed, using—instead of steam—inert gases, and also to ascertain the properties of the products thus obtained. These investigators appear to have done a good deal of work in this direction, and published a series of tables in which the results are recorded.

The first stage of the experiment was to remove all dissolved gas from the oil, for which purpose air was blown through the oil heated to a temperature of 70 degrees for some time. To make a proper comparison between the effect of steam and inert gas, it was necessary to carry out parallel experiments, in one case using steam and in the other inert gas, the other conditions of the experiment being the same in both cases. It was also necessary to study the effect of temperature and duration of heating, as these are important factors in relation to the decomposition of petroleum.

The steam used was superheated to about 250 degrees Centigrade, but the gas used—which was an oil gas—was not previously heated.

After distillation, the products from both experiments were treated by the usual sulphuric acid scrubbing, neutralized with alkali, and washed. The products were found to have the following properties:

	Specific Gravity	Flash Point ° C.	Viscosity
Steam distillate	.9147	164	7.59
Gas distillate ...	.9158	200	8.12

It is seen that the substitution of inert gas for steam in the distillation has resulted in a product of higher specific gravity, flash point and viscoisity, showing that with the gas the decomposition which always accompanies the distillation of the higher boiling fractions of petroleum has been less than by the use of steam.

It was thought that this favorable result might be due to the fact that the gas is not pre-heated, whereas the steam is used at a high temperature, and to test this a second series of experiments was carried out in which the gas was heated to the same temperature as the steam. The preheating of the gas however, did not appear to alter the result.

The obviously protecting influence of oil gas against decomposition of the petroleum was not found when, instead of oil gas, a smoke gas consisting of nitrogen, carbon dioxide with 2 and 3 per cent of free oxygen was used. A notable oxidation took place by the action of the free oxygen, and some water was also formed. The treated distillate contained no more acid content than when oil gas was employed, and the acid content was considerably smaller in both cases than when steam was used in the distillation. This and other points will form the subjects of further research by the authors, who expect to obtain further useful information.

So far as they go, says the London Petroleum Times, the results obtained seem to show that inert gas in petroleum distillation is even a more efficient protection against molecular decomposition than steam, should prove more economical to use, and the products are also superior and of greater value.

The employment of inert gases in this

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way are better suited for distilling the lubricant fractions than those of lower boiling point. It might be expected that the light products of crude oil, in the form of vapor mixed with a relatively large volume of incondensable gas, would be somewhat difficult to separate out, but this difficulty would not occur with the higher boiling fractions, which would condense very readily in cooling somewhat below their boiling points.

NEW MANUFACTURING PLAN BY BARNSDALL

The Barnsdall Corp., according to official announcement, has organized the Petroleum Chemical Corp., to manufacture alcohol from petroleum residue. Associated in the new enterprise is Arthur D. Little, Inc.

"For the past 3 years," the announcement stated, "Arthur D. Little, Inc., chemists and engineers, at Cambridge, Mass., have been concentrating, with a large scientific and technical organization, upon the fundamental chemistry of petroleum hydro-carbons with the object of establishing new values in petroleum. The developments have been financed by Barnsdall Corp. and its associates.

"These intensive studies have culminated in the development of a group of interrelated processes based on a new vapor-phase cracking process, which, according to the range of products desired, yields from cracking stock from 40 to 55 per cent motor spirit, which possesses remarkable properties as an anti-knock motor fuel."

GAIN FROM BURNERS AND CLOSED CAR USE

NEW YORK, Feb. 7.—E. C. Winters, president of the Lion Oil Refining Co., operating in the Arkansas and other fields, is in New York after a trip of inspection through most of the fields of the country. He said the recent advances in oil and gasoline prices had caused a marked improvement in business conditions in the producing districts.

"The recent reduction in the daily production of oil in the Wortham Field," he said, "and the fact that the old pools are declining, have caused a rather sharp change-about in sentiment in the oil industry, which might be likened to the change-about in the farm situation by the advance in wheat. It has proved a relief to bankers as well as oil producers and I find sentiment in the industry now very optimistic. There have been two developments which have been of great aid to consumption. One of them is the increased popularity of closed cars, and the other the gain in sales of oil burners for domestic use. These have brought about a greater degree of oil consumption this winter than ever before in the history of the industry.

"The prescent prospects are for an early and normal spring, with especially heavy consumption of oil products in the agricultural districts."

UNIVERSITY OIL CLASSES

LOS ANGELES, Cal., Feb. 7.—The Pacific Natural Gasoline Co. has arranged for University of California extension division classes in oil engineering. The Shell and Standard oil companies are already giving these university courses to many of their employes. The Pacific Natural Gasoline Co. has signed for 60 hours' work, or two classes in subject of casinghead gas. A class in lubrication is just starting. A class in fractional distillation starts in Long Beach February 12.

UPHOLDS SUNDAY SALES

CHATHAM, Ont., Feb. 7.—The appellate division of the Supreme Court of Alberta by a majority decision of three of the five judges, has decided that gasoline can be sold legally in Alberta on Sundays. The decision was given as the result of an appeal following a police court conviction in a test case.

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Detailed Operations in Western Fields for Month of January

Summary of All Fields

Field—	Comp.	Prod.	Dry	Gas
Eastern	291	1,327	45	70
Lima	27	357	4	2
Central Ohio	27	29	5	19
Indiana	8	96	3	0
Kentucky	92	1,206	24	6
Tennessee	2	0	1	1
Illinois	14	278	5	0
Kansas	65	7,362	31	8
Oklahoma	236	64,657	73	27
North Central Texas	193	18,072	62	6
East Central Texas	130	279,542	19	1
Gulf Coast	64	10,875	23	1
Southwest Texas	19	7,100	5	2
Louisiana-Arkansas	126	8,862	30	21
Wyoming	29	5,152	7	1
Montana	7	30	4	1
Colorado	6	130	5	0
New Mexico	3	180	0	0
Total January	1,339	405,155	352	166
Total December	1,610	265,865	475	213
Difference	271	139,290	123	47

Rigs and Wells Drilling

Field—	Rigs	Drg.	Ttl.
Eastern	164	369	533
Lima	5	48	53
Central Ohio	36	72	108
Indiana	1	8	9
Kentucky	17	203	220
Tennessee	6	9	15
Mississippi	6	20	26
Alabama	1	9	10
Georgia	2	3	5
Illinois	1	17	18
Kansas	78	360	438
Oklahoma	249	1,008	1,257
North Central Texas	80	289	369
East Central Texas	27	251	278
Gulf Coast	44	131	175
Southwest Texas	6	4	10
Wyoming	97	269	366
Montana	21	133	154
Colorado	14	85	99
Utah	1	26	27
New Mexico	3	36	39
Louisiana-Arkansas	76	237	313
Total January	935	3,587	4,522
Total December	981	3,651	4,632
Difference	46	64	110

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. The rgis and wels drilling are set forth in similar manner. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	27	5,060	9	1
Tulsa	17	197	7	2
Okmulgee	14	905	2	1
Seminole	36	11,619	8	4
Okfuskee, Hughes and McIntosh	21	13,252	6	1
Muskogee and Wagoner	17	60	13	2
Creek County	31	4,565	6	5
Pawnee	4	235	1	0
Payne	3	0	1	2
Lincoln	4	25	3	0
Kay	13	12,303	1	1
Noble	12	15,479	3	0
Carter	11	635	2	1
Stephens and Cotton	7	25	2	4
Miscellaneous	19	297	9	3
Total January	236	64,657	73	27
Total December	382	122,702	116	41
Difference	146	58,045	43	14

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Osage	41	60	101
Tulsa	7	20	27
Okmulgee	19	51	70
Seminole	22	128	150
Okfuskee, Hughes and McIntosh	41	154	194
Muskogee and Wagoner	3	32	35
Creek	34	88	123
Pawnee	17	62	79
Kay	14	68	82
Payne and Lincoln	7	51	58
Garfield and Noble	9	70	79
Carter	13	46	59
Stephens and Cotton	6	33	39
Miscellaneous	17	144	161
Total January	249	1,008	1,257
Total December	181	987	1,168
Difference	68	21	89

WELLS COMPLETED

OSAGE COUNTY

12-25-5e Midland Oil 1..... 50
12-27-5e Carter Oil 11..... 15
12-27-6e Phillips Pet. 9..... 75
The Texas Co. 8..... 200
10-27-11 Owen Osage 308..... gas
23-24-9e H. V. Foster 43..... dry
34-25-8e Marland Oil 1..... dry
30-25-12 Beacon Oil 3..... dry
25-28-10 Owen Osage 303..... dry
14-29-11 J. R. Hadley 13..... dry
14-27-6e Phillips Pet. 11..... 50
18-27-6e The Texas Co. 9..... 200
14-21-10 Breene et al 3..... 100
20-21-12 Barnsdall Oil 17..... 15
16-24-8e Marland & Testlog Oil 5..... 20
11-27-5e Phillips Pet. 8..... 3500
25-27-5e Phillips Pet. 10..... 75
18-27-6e Phillips Pet. 7..... 125
The Texas Co. 10..... 175
14-21-10 Breene et al 4..... 200
13-23-8e Twin State Oil 6..... 100
25-24-10 C. B. Peters et al 1..... 10
18-27-6e Phillips Pet. 13..... 150
28-20-11 Gray Oil 6..... dry
6-22-9e Peters Pet. 8..... dry
4-23-10 Rex Pyramid Oil 1..... dry
36-26-11 Olean Pet. 2..... dry

Wells completed..... 27
Production..... 5060
Dry..... 9
Gas..... 1
Gas production..... 1,750,000

TULSA COUNTY

5-19-12 Partridge, Thompson & Black 3 17
3-17-14 Childers, Hall et al 3..... 30
6-19-12 Bruner, Sand Springs Home 7 25
15-16-14 Pouncil, Mallory et al 7..... 15
16-17-13 Posey, Enfisco Oil 13..... dry
8-20-13 Fee, H. C. Tyrell 8..... dry
7-20-13 Wilkinson, Echo Oil 2..... 10
33-20-14 Hamilton, Petroleum Eng. Co. 1 25
6-20-13 Komma, J. E. Moore et al 1.. gas
36-21-13 Haisel, M. C. Hawk et al 1.... dry
17-21-14 Legear, Hart & Kister 1..... dry
30-22-14 Fields, Sanders Oil 2..... gas
Goodale, J. H. Middleton 1.... 35
17-22-14 Murphy, Enfisco Oil 1..... dry
14-16-12 Bawlin, Riverland Oil ..... dry
5-19-12 Partridge, Bruner Oil 2..... 40
13-18-12 Donaldson, Assn. P. & R. Co. 1 dry

Wells completed..... 17
Production..... 197
Dry..... 7
Gas..... 2
Gas production..... 7,000,000

OKMULGEE COUNTY

25-13-11 Kemp, Eastern Oil 8..... 300
25-14-12 Milner, Mueller, Jordan & Ashley 1..... dry
11-15-12 Cover, Olean Pet. 1..... 30
3-15-11 Grayson, Webster et al 6..... 35
31-12-14 Bullock, W. L. Varner 2..... 10
34-16-12 Meadors, Sheldon & Superior 2 80
16-14-14 Love, F. D. Misener 6..... 20
34-16-12 Barnett, Central National Oil 3 50
McGee, Sheldon Oil 1..... 500
5-16-13 Bartholf, Thompson & Black 3 35
32-13-11 Thomas, Denver P. & R. Corp. 4..... 30
7-13-15 Bruner, E. J. Lambert 5..... gas
28-14-14 Andy, W. R. Sommerville 1.... 15
16-14-14 Love, F. D. Misener 7..... dry

Wells completed..... 14
Production..... 905
Dry..... 2
Gas..... 1
Gas production..... 250,000

SEMINOLE COUNTY

10-10-8e Berryman, Roxana Pet. 1-A.... gas
Berryman, Roxana Pet. 2.... gas
Little, Carter Oil 3..... 20
15-10-8e Yarhola, Cosden Oil 7-W..... 250
32- 8-8e Aldridge, Magnolia Pet. 2..... 156
4-10-8e Dunn, Waite Phillips Co. 6..... 480
Jackson, Cosden Oil 6..... 150
10-10-8e Berryhill, Roxana Pet. 3..... 40
15-10-8e Yarhola, Cosden Oil 7-W..... 980
30- 8-8e Howard, Magnolia Pet. 2..... 30
32- 8-8e Walker, Magnolia Pet. 1..... 70
2- 8-8e Manley, Southwestern Pet. 1.. dry
3-10-8e Yarhola, Gypsy Oil 4..... 400
4-10-8e Dunn, Waite Phillips 7.....2280
Wisner, Southwestern Pet. 8..2160
Dunn, Empire G. & F. 3..... 80
Dunn, Empire G. & F. 4..... 300
9-10-8e Hill, Sinclair Oil 2..... gas
10-10-8e Little, McMann Oil 5.....180
15-10-8e Harjo, Houston Oil 1.....1788
16-10-8e Roberts, Carter Oil 4..... 30
15-10-8e Tiger, Roxana Pet. 2..... dry
23- 9-8e Easup, T. Atkins et al 1..... dry
10-10-8e Little, The Prairie Oil 1..... dry
3-10-8e Yarhola, Gypsy Oil 2..... 50
4-10-8e Jackson, Cosden Oil 15..... 700
4-10-8e Wisner, Southwestern Pet. 2.. 600
Wisner, Southwestern Pet. 8.. 725
10-10-8e Little, McMann Oil 4..... gas
36- 8-7e Cumsah, W. R. Ramsey 1..... 80
19- 8-8e McGiesey, Ramsey & Boggs 1.. 50
Townsite, Ramsey et al 1..... 20
10-10-8e Little, McMann Oil 2..... dry
19- 8-8e Townsite, Ramsey 1..... dry
29- 8-8e Brown, Magnolia Pet. 1..... dry
33- 8-8e Parker, Magnolia Pet. 5..... dry

Wells completed..... 36
Production..... 11619
Dry..... 8
Gas..... 4
Gas production..... 110,000,000

OKFUSKEE, HUGHES AND McINTOSH COUNTIES

14-11-13 Herod, R. King 3..... dry
19-11-10 Grayson, Gibson & Zahniser 1.. 25
3- 9-9e Grayson, T. B. Slick 3..... 400
Grayson, T. B. Slick 1.....1255
25-11-9e Hill, E. R. Robinson & Gibson 1..... gas
14-10-8e King, Roxana Pet. 3..... 309
King, Gypsy Oil 1..... 160
35-10-9e Sand, Kingwood Oil 3 (second completion) 1900
Sand, Kingwood Oil 6.....1165
5-13-9e Fixico, West et al 1..... dry
27-11-11 Harjo, H. F. Clark 1..... dry
26-10-9e Sawyer, Bingman-Smith Oil 1 dry
9- 9-11 Eason, Mid-Kansas Oil 1..... dry
12- 8-8e Culler, Roxana Pet. 3..... dry
36-12-10 Brook, Atlantic et al 2..... 250
35-10-9e Sand, T. B. Slick 3..... 213
Sand, T. B. Slick 4..... 175
3- 9-9e Grayson, T. B. Slick & Gypsy Oil 3.....2250
Grayson, T. B. Slick & Gypsy Oil 2.....2000
Grayson, T. B. Slick 4.....1650
Alexander, Cosden Oil 7-W....1500

Wells completed..... 21
Production..... 13252
Dry..... 6
Gas..... 1
Gas production..... 30,000,000

MUSKOGEE AND WAGONER COUNTIES

4-16-15 Colbert, Savoy Oil 9..... 35
24-18-15 Taylor, Hughes & McGill 1.... gas
7-17-16 Haynie, H. H. Orr 2..... dry
34-17-18 Morey, E. M. Swanson 2..... dry
25-17-16 Tucker, Larsarskey 1..... 25
29-17-17 Lewis, W. T. Wright 1..... dry
4-17-18 Posey, R. W. Sawyer 2..... dry
35-18-19 Talbert, Aggas & Kirker 1.... dry
17-17-16 Boudinot, O. A. Sewell 2..... gas
2-15-16 Perryman, A. B. Ice 2..... dry
13-16-15 Hamon, G. D. Shirer 4..... dry
33-17-16 Charles, Young 1..... dry
18-18-15 Anderson, G. H. Lowe 1..... dry
9-18-16 Bird, Winters 1..... dry
16-18-16 McIntosh, A. L. Burwell 1.... dry
19-18-16 Moody, J. Shaffer 1..... dry
36-18-17 Green, Archer 19..... dry

Wells completed..... 17
Production..... 60
Dry..... 13
Gas..... 2
Gas production..... 10,000,000

CREEK COUNTY

24-17-8e Green, Lima Oil 2..... gas
25-17-8e Morrison, Roland Oil 2..... gas
16-16-9e McNoe, Nowata O. & R. 2.... 60
8-16-12 Townsite, Hall & Crider 1.... 40
20-14-10 Stuart, C. F. Noble 1..... 380
16-18-7e Manual, Sinclair Oil 8..... dry
18-18-11 Bruner, McLean et al 3..... dry
17-15-8e Roberts, Eastern Oil 7..... 496
17-14-10 Johnson, Hall & Donnelly 2... 240
20-14-10 Kimble & Reading, Wilcox Oil 1 90
33-16-9e Shoals, The Prairie Oil 8..... 22
20-19-8e Canard, Steinberger & Smith 1 gas
32-17-8e Washington, Olean Pet. 7..... 248
26-14-8e Johnson, The Texas Co. 3..... 50
8-17-11 Freeman, Ireland et al 2..... gas
8-16-12 Townsite, Suppees et al 3..... 40
Townsite, Suppees et al 4.... 500
Townsite, Woodbury et al 2.... 20
Townsite, Hendricks & Vick Oil 1..... 100
4-14-10 Abraham, Peters Oil 1..... 175
17-14-10 Peters, Donnelly et al 2..... 70
20-14-10 Kimble & Reading, Wilcox Oil 2 227
12-19-8e Grayson, J. B. Greaves 2..... dry
30-15-9e Unallotted, Billingslea et al 1 dry
13-17-8e Smith, The Prairie Oil 1..... gas
19-17-10 Wanuke, C. L. Sherman et al 1 20
34-16-9e Brady, Twin State Oil 1..... 110
30-15-9e Unallotted, Tibbens O. & G. 3 1300
20-14-10 Kimble & Reading, Wilcox Oil & Gas 2, (second comp.).. 377
36-16-10 Burford, Independent O. & G 2 dry
8-16-12 Townsite, A. B. Ice 1..... dry

Wells completed..... 31
Production..... 4565
Dry..... 6
Gas..... 5
Gas production..... 27,500,000

PAWNEE COUNTY

16-20-6e School Land, Magnolia Pet. 3.. 45
8-20-7e Fleming, Twin State Oil 4.... 150
21-20-6e Lesher, Magnolia Pet. 1..... dry
15-20-7e Ham, The Prairie Oil 3..... 40

Wells completed..... 4
Production..... 235
Dry..... 1

PAYNE COUNTY

36-19-5e Ellis, Josey Oil 1..... gas
2-18-5e Laughlin, Shaffer Oil 9..... gas
17-19-6e Moser, Carter Oil 1..... dry

Wells completed..... 3
Dry..... 1
Gas..... 2
Gas Production..... 14,000,000

LINCOLN COUNTY

18-13-5e Gallagher, Sun Ray Oil 1..... dry
5-13-6e Lewis, Mt. State Oil 1..... dry
15-14-6e De Lasier, J. C. Cook 1..... 25
18-14-5e Bray, Magnolia Pet. 1..... dry

Wells completed..... 4
Production..... 25
Dry..... 3

KAY COUNTY

21-29-1w McCormick, Comar Oil 1..... 116
Harvel, Comar Oil 1..... 343
22-29-1w Le Mars, White Eagle Oil 1.... 130
34-25-1w Woods, Amerada Pet. 39.....2300
McDaniels, Phillips Pet. 6.... 802
1-26-2w Smith, The Prairie Oil 1.... gas
34-25-1w Beverlin, Comar Oil 3-W.....3359
10-27-1w Humphries, Blackwell Oil 2... 55
1-26-2w Hockstater, Alcorn Oil 1..... gas
12-26-2w North, Alcorn Oil 2..... gas
27-25-1w Davis, The Texas Co. 7.....3024
35-25-1w Endicott, Comar Oil 8-W.....2174
15-29-1e Davidson, Lancer 1..... dry

Wells completed..... 13
Production..... 12303
Dry..... 1
Gas..... 3
Gas production..... 111,000,000

NOBLE COUNTY

2-24-1w Shawver, Gypsy Oil 88.....2400
Guame, Comar Oil 9-W..... 577
Shawver, Gypsy Oil 87.....1634
Shawver, Gypsy Oil 91.....2480
Gaume, Comar Oil 10-W.....1009
3-24-1w Pettit, Comar Oil 9-W..... 956
11-24-1w McCutcheon, Comar Oil 1..... dry
27-21-3e Dollarhide, Marland Oil 1..... dry
2-24-1w Blubaugh "C," Comar Oil 5-A 11
Blubaugh "C," Comar Oil 9.. 40
Gaume, Comar Oil 14-W.....1372
3-24-1w Pettit, Comar Oil 18-B..... dry

Wells completed..... 12
Production..... 15479
Dry..... 3

CARTER COUNTY

18-1s-3w Hardin, Magnolia Pet. 1..... 5
32-2s-2w Palmer, Schermerhorn Oil 5.. 180
28-5s-1e Westheimer, Amerada Pet. 3... 110
4-4s-3w Jones, Coline Oil 37..... dry
32-1s-3w Johnson, Magnolia Pet. 2..... 85
25-2s-3w Simpson, Skelly Oil 2..... 75
27-2s-3w Fee, C. R. Smith 2..... gas
35-2s-3w Brooks, Rockland Oil 9..... 35
31-2s-3w Bennett, Magnolia Pet. 13.... 15
20-5s-1e Criner, Amerada Pet. 6..... 130
Gardner, Amerada Pet. 5..... dry

Wells completed..... 11
Production..... 635
Dry..... 2
Gas..... 1
Gas production..... 4,000,000

STEPHENS AND COTTON COUNTIES

25-1s- 9w Edmundson, Carter Oil 1.... gas
13-5s-13w Day, Fisher et al 1..... dry
5-1s- 8w Armstead, Gant et al 1..... dry
19-1s- 8w Brooks, Lone Star Gas 5..... gas
20-1s- 8w Bartley, Magnolia Pet. 9..... gas
22-1s- 8w Warner, C. & O. Drilling Co. 2 gas
7-2s- 8w Mitchell, Luffborough & Ryon 1..... dry

Wells completed..... 7
Production..... 31
Dry..... 1
Gas..... 1
Gas production..... 21,750,000

MISCELLANEOUS

Grady County—
26-5n- 8w Farwell, Little Nick Oil 3.... gas

Greer County—
26-7n-22w Bowman, White & Debolt 1.. dry

Tillman County—
.7-2s-18w Duncan, Overbee, Crone & Kirkwood 4..... dry
4-5s-14w Goehler, Schwartz et al 1... dry

Washington County—
23-29-13 Sullivan, C. H. Pittman 1.... dry
18-26-14 H. C. Welble et al, T. E. Rice 3..... 1
14-26-13 Kiefer, W. J. Troyman 1.... dry

Nowata County—
15-25-16 Tillotson, Smithfield Oil 3.... 1
14-26-15 Fee, Eugene Wilkinson 1.... dry
28-26-17 Fee, Anderson & Roberts 1... dry
35-26-17 McKnite, Lenox Prod. Co. 1.. gas

Rogers County—
22-24-17 Fee, Fleming & Bedford 6.... 10

Garfield County—
26-22- 4w Coker, Knox Oil 2..... 6
19-22- 3w Crews, Sinclair Oil 15..... 6
30-22- 3w Crews, Sinclair Oil 7..... 10

Comanche County—
25-1n- 9w Hines, Ka-Wye Drlg. Co. 3.. gas

Grant County—
23-27- 3w Crouch, Western States Oil 2 1

Beckman County—
24-8n-22w Unknown, J. R. Lines 1..... dry
31-8n-21w Wall, Kouri et al 1..... dry

Wells completed..... 1
Production..... 20
Dry..... 1
Gas..... 1
Gas production..... 22,750,000

OSAGE COUNTY

Rigs

24-21-8e Barnsdall Oil 5.
34-22-10 Tidal Osage Oil 39.
20-23-8e Red Bank Oil 6.
32-24-8e R. E. Seamans et al 1.
24-24-9e Tidal Osage Oil 13.
26-24-9e Tidal Comar Oil 3.
33-24-9e Peters Pet. 5.
13-25-6e Clark & Barnes 1.
20-25-8e Mid-Kansas Oil 1, 2.
27-25-8e Atlantic Oil 5.
19-25-9e New England Oil 12.
34-25-9e C. K. Dresser 16.
20-26-6e Carter Oil 1, 2.
21-26-6e Lewis Oil 1, 2, 3.
Carter Oil 1, 2, 3, 4.
2-27-5e Skelly Oil 1, 2.
11-27-5e Phillips Pet. 1, 5, 8, 9, 12, 13, 14.
12-27-5e Phillips Pet. 1, 2, 3, 4, 8, 13.
10-27-11 Owen Osage Gas 312.
9-27-12 Owen Osage Gas 313.
16-28-9e A. M. Landon 10.
34-29-11 Phillips & Skelly Oil 1.

Wells Drilling

21-20-11 Sand Springs Home Oil 4.
29-20-11 Okla. Nat. Gas 657.
25-21-10 Titus et al 1.
28-21-10 Theirich et al 2.
6-21-11 Titus et al 3.
31-21-12 Tidal Osage Oil 3.
27-22-8e Acacia Oil 2.
36-22-8e Sand Springs Home Oil 82.
11-22-10 Gilliland Oil & New England 5.
12-22-11 D. F. Millard 1.
31-22-12 Winona Oil 1.
10-23-8e McCune et al 1.
7-23-11 Owen Osage Gas 309.
12-24-4e Douglas Oil 1.
8-24-8e Riverland Oil 1.
25-24-8e Price Oil 4.
28-24-9e C. B. Peters 1.
31-24-9e Alexander Shakley 3.
12-24-10 Barnsdall Oil 17-A.
5-24-11 M. Grace Maxwell 2.
12-24-11 Titus et al 4.
19-25-8e A. G. Oliphant 3.
24-25-8e Gilliland Oil 3.
27-25-8e Atlantic Oil 3, 6.
28-25-8e E. B. Lawson 9.
29-25-8e The Texas Co. 8.
14-25-9e Wolverine Oil 1.
1-25-11 Robinson 5.
16-26-6e Carter Oil 13.
17-26-6e Cosden Oil 6.
21-26-8e Petroleum Drilling Co. 12.
13-27-5e Carter Oil Co. 5, 9.
26-27-5e Mid-Kansas Oil 8.
18-27-6e Phillips Pet. 10, 14.
The Texas Co. 2.
29-27-8e Seamans et al 2.
14-28-10 Jackson & Wise 1.
30-28-11 Owen Osage Gas 311.

Shut Down

14-21-10 T. O. Lilystrand 2.
6-21-11 Titus et al 7.
31-21-12 Barnsdall Oil 25.
13-22-10 Tidal Oil 18.
15-22-10 Foster & Alexander 1.
34-22-10 Tidal Osage Oil 28.
20-23-8e Red Bank Oil 7.
29-23-8e Red Bank Oil 3.
4-23-10 D. Slingluff 2.
36-24-8e H. V. Foster 36.
31-25-7e Vickers & Higgins 1.
29-25-8e The Texas Co. 9, 10, 12.
24-25-9e Steyner 4.
26-27-5e Skelly Oil 3.
17-27-10 Prestbury et al 3.
9-28-11 Howard et al 1.
36-29-11 A. D. Simons 4.
Rigs, 41; wells drilling, 60; total, 101.

TULSA COUNTY

Rigs

4-19-10 Lindsey, Steele et al 1.
5-19-12 Grayson, Echo Oil 13.
Partridge, Shaffer O. & R. 4.

20-19-12 Barry, Thornton et al 12.
1-19-13 Froe, Edwards et al 2.
Unallotted, Edwards et al 3.
19-17-13 Coppedge, W. E. Hammond et al 1.
Wells Drilling
1-19-13 Grayson, Echo Oil 12.
Partridge, Thompson & Black 4.
Berryhill, Sand Springs Home Oil 3, 4.
16-19-12 Unallotted, Jenson & Harris 2.
14-19-13 Poor Farm, Tulsa County 1.
27-19-14 Marshall, Hall et al 2.
1-18-13 McIntosh, Sterling O. & G. 4.
23-18-13 Mullen, Hamilton et al 4.
5-18-14 Johnson, Brooks Drlg. Co. 1.
1-17-14 Drew, Wade et al 3.
13-17-14 McIntosh, T. B. Slick 1.
16-16-12 Jenkins, Thompson & Black 2.
Shut Down
4-19-13 Childers, F. B. Jackson et al 1.
27-19-12 Unalolted, Saunders et al 1-A.
9-18-13 Strip, Pomeroy & Pouder 3.
14-18-13 Perkins, Vick Oil 10.
27-17-12 Hutchins, Bradstreet Oil 1.
9-16-12 Whitstone, S.W. Anthony 1.
4-16-12 Warlecy, Howard & Duffield 2.
Rigs, 7; wells drilling, 20; total, 27.

OKMULGEE COUNTY
Rigs
27-16-12 Haskins, Shaffer O. & R. Co. 1.
24-16-12 Meadors, Meadors & O'Brien 2, 3.
Meadors, Sheldon & Superior Oil 4.
McGee, Sheldon & Houston Oil 2.
9-15-11 Adams, Jackson & Wise 6.
9-15-11 Strip, Indiahoma Ref. 2.
11-15-11 Adams, Cosden Oil 5.
13-15-11 Pendleton, Pollyanna Oil 8.
25-15-11 Kemp, Eastern Oil 9.
29-13-12 Sands, E. R. Black 1.
26-13-12 Shepherd, Detrick & Logan et al 1.
31-12-12 Rentie, Dr. Thomas et al 10.
24-12-13 Holmes, Eagle Picher 6.
Rohnes, F. G. Dickerson 1.
22-11-13 Ashbury, Webb et al 1.
20-13-14 Hawkins, W. B. Pine 2.
16-14-14 Lowe, F. D. Misener 8.
8-14-15 Anderson, J. L. Powell 5.
Wells Drilling
24-16-12 Barnett, Central National Oil 3.
Buffington, Berry Pet. 1.
Meadors, Meadors & O'Brien 1.
Vore, Sheldon & Superior 2.
Meadors, Sheldon & Superior 1, 3.
Leyfor, Sheldon & Superior 1.
Barnett, Henry Oil & Noble Oil 1.
8-15-11 Grayson, Webster et al 7.
Galloway, Vise et al 1.
Sallee, Sheridan Oil 3.
17-15-11 Gibson, Shaffer O. & R. 3.
23-15-11 Graham, Sheldon Oil et al 1.
25-15-11 Thompson, Kellough & Thompson 1.
8-15-12 McKee, Gates & Cook Drlg. Co. 1.
16-15-12 Havercamp, Briscoe et al 1.
23-13-11 Murvoll, Waite Phillips Co. 1.
29-13-11 Roberts, Mt. State & Clark 1.
11-13-12 Bearleman, King & Jackson 2.
23-13-12 Wilson, Eagle Picher 2, 3.
5-12-12 Sullivan, Calvin & Smith 5.
6-13-12 Mitchell, Gladys Bell et al 5.
Diamond, Southern States Oil 1.
7-13-12 Turner, A. D. Morton & Co. 1.
20-13-13 Henry, Southern States Oil 1.
16-13-13 Brunner, Pulaski Oil 7.
29-13-13 Smith, Monosett 1.
15-13-14 Scott, Utah Oil 13.
4-14-13 Sneed, Chief Drilling Co. 1.
16-14-14 Stevens, Twin State Oil 2.
28-14-14 Andy, W. R. Sommerville 3.
20-14-14 Thomas, W. B. Pine 1.
16-14-14 Lewis, C. Smith 1.
16-15-13 Sugar, Vollentine 2.
12-15-14 Owen, E. & Grubbs 5.
13-15-14 Fish, A. W. Cline 2.
Shut Down
7-13-15 Freeman, A. G. Hazlett 4.
13-14-15 Carter, R. L. McFann 2.
16-16-14 Roberts, J. H. White et al 1.
13-15-11 Pendleton, Pollyana Oil 5.
14-15-12 Sheppard, Frazier et al 1.
14-14-11 Lunsford, Clarion Oil 1.
23-13-11 Smith, L. Deiter et al 1.
Morgan, Georgia Pet. 2.
13-13-11 Beets, Brock et al 9.
31-13-12 Rentie, Eureka Oil 10.
Rentie, Wooster & Mee 4.
9-11-12 Hawkins, Moffett & Slick 1.
31-13-13 Ponds, Keener 5.
Henry, Eagle Picher 1.
Rigs, 19; wells drilling, 51; total, 70.

SEMINOLE COUNTY
Rigs
14-11-7e Harjo, Central National Oil 1.
33-11-8e Williams, Cosden & Waite Phillips 1.
Jackson, Pure Oil 2, 3, 4.
Pierce, Mutual Oil 4.
4-10-8e Fixico, Gypsy & Laurel Oil 5.
5-10-8e Fixico, Sinclair Oil 2.
6-10-8e Lowe, Denver P. & R. Corp. 1.
9-10-8e Deer, Devonian Oil 1.
19-10-8e Little, Roxana Pet. 1, 2, 3.
15-10-8e Yarhola, Cosden Oil 3.
Tiger, Roxana Pet. 3.
1- 9-8e Sanjo, F. J. Searight 1.
32- 9-8e Williams, Holmes & Jarvis 1.
24- 9-8e Simon, Kingwood & Empire 1.
30- 8-8e Yarhola, W. R. Ramsey 1.
Howard, Magnolia Pet. 3.
23- 8-8e Walker, Dixie Oil 1.
30- 6-8e West, T. B. Slick 1.
Wells Drilling
8-10-8e Buckner, The Prairie O. & G. 12, 13, 16.
32-11-7e Thomas, H. F. Wilcox O. & G. 1.
33-11-8e Pierce, Mutual Oil 1, 2, 3.
Pierce, Sinclair Oil 1, 2, 3.
Williams, Pulaski Oil 1.
34-11-8e Hill, Gardner Pet. & Sinclair 1.
33-10-6e Davis, F. J. Searight 1.
5-10-8e Dunn, Carter Oil 1, 2, 3.
Yarhola, Roxana Pet. 2, 3, 5.
Yarhola, Gypsy Oil 5, 6, 7, 8.
4-10-8e Dunn, Waite Phillips 5, 8.
Jackson, Cosden Oil 5, 9, 10, 11, 12, 13, 14.
Jackson, Southwestern Pet. 3, 4, 5, 6, 7, 8.
Wisener, Southwestern Pet. 4, 5, 6, 7.
Yarbrough, Sinclair Oil 2, 3, 4, 5, 6, 7, 8.
5-10-8e Fixico, Gypsy & Laurel Oil 2, 3, 4.
Fixico, Sinclair Oil 1.
Willimas, Gypsy & Laurel Oil 1.
Sampson, Gypsy Oil 1, 2.
Williams, Magnolia Pet. 1.
8-10-8e Willis, Gypsy Oil 3, 4, 5, 6.
Baker, Tidal-Osage Oil 2.
9-10-8e Bunner, Pure Oil 3, 12.
Hale, Gypsy Oil 8.
Hill, Carter Oil 4.
Hall, Carter Oil 2, 3, 4, 5.
10-10-8e Brown, Roxana Pet. 5.
Berryman, Roxana Pet. 3.
Little, Carter Oil 2.
Hill, Carter Oil 4.
Little, Shaffer O. & R. 1.
15-10-8e Tiger, Snowden & McSweeney 3.
Yarhola, Cosden Oil 6.
Harjo, Cosden Oil 3.
Bruner, H. F. Wilcox O. & G. 8.
Harjo, Houston Oil 2, 3.
16-10-8e Roberts, Carter Oil 5.
17-10-8e Buckner, Sinclair Oil 1.
Bruner, Cosden Oil 2, 3.
7- 9-8e Cobb, Holmes & Jarvis 1.
16- 9-8e Young, Roxana Pet. 1.
15- 8-7e Carolina, Magnolia Pet. 1.
25- 8-7e Yornoh, Magnolia Pet. 1.
Logan, Magnolia Pet. 3.
Rosana, Magnolia Pet. 2.
Howard & Ligon, Dixie Oil 2.
35- 8-7e Jones, Magnolia Pet. 1.
Cunsah, W. R. Ramsey 2.
28- 8-8e Fester, Dixie Oil 5.
29- 8-8e Josua, Magnolia Pet. 2.
30- 8 8e Bowlegs, Gardner Pet. 1.
31- 8-8e Salinda, Ramsey 1.
Bowlegs, Ramsey 1.
Amos, P. & R. Corp. 3.
Willis, Boggs Oil & Sykes 6.
32- 8-8e Parker, Dixie Oil 1.
Walker, Magnolia Pet. 2.
Franz, Magnolia Pet. 2.
Aldridge, Magnolia Pet. 1.
33- 8-8e Long, Lewis & Clark 2.
22- 7-7e Davis, Transcontinental Oil 1.
25- 6-6e Mingo, T. B. Slick 2.
33- 6-6e Christy, Maxwell & Harvey 1.
18- 6-7e Sanny, T. B. Slick 1.
20- 6-7e Dindy, McDougal et al 1.
27- 6-7e Chupco, T. B. Slick 17.
Wells Shut Down
33-11-8e Jackson, Pure Oil 1.
14-10-7e Aldridge, Killibrew & Moore 1.
31-10-7e Lack, Wrightsman & Gardner 1.
9-10-8e Bruner, Gardner & Carter 5.
15-10-8e Tiger, Snowden & McSweeney 4.
Tiger, Waite Phillips 1, 2, 3.
16-10-8e Proctor, Roxana Pet. 2.
21-10-8e Harjo, Tidal Osage Oil 3.
35- 9-6e Cudjo, Gillette et al 1.
13- 9-7e Williams, Independent O. & G. 1.
29- 8-8e Walker, Magnolia Pet. 1.
32- 8-8e Long, Lewis & Clark 3.
14- 6-7e Carolina, Link Oil 1.
6- 6-8e Winey, R. F. Garland & Co. 1.
Rigs, 22; wells drilling, 128; total, 150.

OKFUSKEE, HUGHES AND McINTOSH COUNTIES
Rigs
34-10-9e Davis "B," The Prairie O. & G. 1.
33-13-7e Scott, Independent O. & G. 1.
4-13-8e Saryokishe, Link Oil 2.
36-12-10 Gray, Atlantic Oil 3.
Fisher, Atlantic Oil 4.
27-12-11 Holmes, Hartman 1.
32-12-11 McCoy, Josey Oil 5, 6.
25-11-93 Foster, Shaffer O. & R. 1.
14-11-11 Jefferson, Jess Reboid 1.
Taylor, No. Baltimore Oil 1.
12-11-7e Fippe, Amerada Pet. 1.
11-10-8e Little, Roxana Pet. 2.
14-10-8e King, Tidal & Carter Oil 1.
21-10-9e Simon, Cosden Oil 1.
34-10-9e Bruner, Phillips Pet. 1. 2.
Williams, I. T. I. Oil 5, 7, 8.
Williams, Gypsy Oil 5, 6, 7.
35-10-9e Sand, T. B. Slick et al 2-A, 8.
24- 9-8e Simon, Burk Greis Oil 1.
2- 9-9e Bruner, T. B. Slick et al 5, 8.
Alexander, Independent O. & G. 6.
3- 9-9e Alexander, Cosden 4-W, 9-W.
4- 9-9e Tiger, Transcontinental Oil 9.
Carter, Mutual Oil 3.
Carter, E. L. Robinson & Amerada Pet. 6.
17- 9-9e Brown, Margay Oil 7.
18- 9-9e Brown, Arkansas Natural Oil 2.
19- 9-9e Charles, I. T. I. Oil 1.
20- 9-9e Simon, Minnehoma Oil 1.
23- 9-10 Dunzy, E. P. Hawkins 1.
29- 9-10 McCalvary, Kingwood-Brock et al 1.
9-9 -11 Bruner, Mid-Kansas Oil 2.
Wells Drilling
35-10-9e Westbrook, The Prairie O. & G. 2, 3, 4, 5.
34-10-9e Davis "A," The Prairie O. & G. 1, 4, 8.
1-13-7e Simmons, Burk Greis Oil 1.
14-13-8e Billy, Western States Oil 1.
22-12-9e Montgomery, Sinclair Oil 1.
25-12-9e Callahan, Wangerine Pet. 1.
36-12-9e McMahan, Henry Oil & Burk Greis 1.
8-12-10 Yarhola, Blakely et al 1.
9-12-10 Summers, Pratt & Burton 1.
20-12-10 Watson, Amerada Pet. 1.
23-12-10 Harjo, Blakely et al 1.
36-12-10 Gray, Atlantic Oil 2.
Fisher, Atlantic Oil 2.
Gray, Carter & Atlantic Oil 2.
32-12-11 Fields, Josey Oil 1.
Carolina, Josey Oil 2.
33-12-11 Sheldon, Anglo-Texas Oil 1.
Grayson, Anglo-Texas Oil 3.
Jacobs, Independent O. & G. 1.
36-11-9e Wind, Olean Pet. 2.
1-11-11 Hill, Phillips Pet. 1.
2-11-11 Garnett, Tidal Oil et al 1.
3-11-11 Meyers, W. B. Pine 4.
Tarvin, Webster et al 2.
13-11-11 Holmes, Gladys Bell Oil 8.
22-11-11 Holmes, Deaner & Jamieson 3.
29-11-11 Jackson, Burk Greis Oil 1.
26-11-7e Schove, C. J. Wrightsman 1.
14-10-8e Haner, Roxana Pet. 1.
King, Tidal Osage Oil 3.
King, Snowden & McSweeney 1.
25-10-8e Bruner, Transcontinental Oil 1.
8-10-9e Morris, Berry Pet.
22-10-9e Samuel, Fuhrman & Shaffer Oil 1.
33-10-9e Barnett, Jennings et al 1.
Johnson, Carter Oil 1, 2, 3, 5, 4.
Barnett, Arkansas Fuel Oil 1.
34-10-9e Williams, I. T. I. Oil 1, 3, 4, 6.
Williams, Gypsy Oil 3, 4.
35-10-9e Sand, T. B. Slick, 2, 5, 6, 7.
Dunson, T. B. Slick 1, 2.
Carbogo, Cosden Oil 1, 2, 3, 4.
Sand, Kingwood Oil 4, 7, 8.
36-10-9e Harjo, Amerada Pet. 1.
35-10-12 McQueen, Carter Oil 1.
1- 9-9e Arboy, Josey Oil 1.
Bruner, Independent O. & G. 1, 2.
2- 9-9e Alexander, T. B. Slick et al 1, 3, 4.
Bruner, T. B. Slick et al 2, 3, 4, 6, 7, 9.
Grayson, Gypsy Oil 1.
Alexander, Independent O. & G. 3, 4, 5.
Alexander S., Independent O. & G. 2, 3, 4.
3- 9-9e Grayson, T. B. Slick & Gypsy Oil 4, 2, 4, 3, 2, 3, 4, 2, 3, 4.
Alexander, Cosden Oil 10-w.
Arber, Phillips Pet. 1, 2.
4- 9-9e Tiger, Foster Inv. Co. 3.
Tiger, Transcontinental Oil 6, 7, 8.
Carter, Skelly Oil 2.
Carter, Mutual Oil 1, 2.
Carter, E. L. Robinson & Amerada Pet. 4, 5.
5- 9-9e Carter, Transcontinental Oil 2.
15- 9-9e Smith, T. B. Slick 1.
17- 9-9e Brown, Arkansas Natural Oil 3.
18- 9-9e Brown, Magnolia Pet. 3.
22- 9-9e Bowlegs, Gypsy Oil 1.
3- 9-11 Baker, Tidal Osage Oil 4, 5.
4- 9-11 Baker, Magnolia Pet. 1.
Baker, Tidal Osage Oil 1, 4, 5.
Coachman, Tidal Osage Oil 2.
Baker, T., Tidal Osage Oil 1, 2.
Baker, Mid-Kansas Oil 1.
Byrd, Mid-Kansas Oil 2.
1- 8-8e Chupco, Berry Pet. 1.
Manley, Sinclair Oil 1.
12- 8-8e Walker, Roxana Pet. 1.
35- 8-8e Jefferson, Johnson & Ashe 1.
18- 8-10 Irvine, Dixie Oil 1.
5- 7-8e Grayson, Dixie Oil 1-B.
6- 7-8e Gunn, Dixie Oil 1.
23- 7-8e Manley, Magnolia Pet. 1.
8- 6-10 Kiles, Walton, Snyder & Marshall 1.
29-11-14 McIntosh, E. O. Sargent 2.
2-12-16 Winebloot, Montague-Texas Oil 2.
Shut Down
25-12-10 Fisher, Wedell & Blakely 1.
33-12-11 McCoy, Josey Oil 3.
34-11-11 Barnett, Oklavania Oil 3.
33-10-9e Barnett, Midwest & Gulf Oil 1.
35-10-9e Sand, Kingwood Oil 5.
17- 9-9e Brown, Margay Oil 2, 5, 6, 1.
Brown, Roxana Pet. 1, 2.
20- 9-9e Simon, Gilcrease Oil 2.
23- 9-9e Bruner, C. J. Wrightsman 1.
11- 8-8e Larney, Dixie Oil 1.
4- 5-11 McClain, Mathers & Skelly 1.
5-11-11 Sears, Hartman et al 1.
14-10-8e King, White Eagle O. & R. 1.
15- 9-9e Davis, Turman Oil 1.
1- 8-8e Chupco, Berry Pet. 2.
Rigs, 41; wells drilling, 154; total, 195.

MUSKOGEE AND WAGONER COUNTIES
Rigs
13-13-15 McGilbray, McCutcheon 2.
16-15-15 Tucker, G. S. Wilson 2.
9-16-16 Croosley, H. E. Jones 1.
Wells Drilling
1-14-17 Sango, T-O Pet. 7.
33-14-17 Drake, J. M. Foltz 2.
9-14-18 Wiley, J. S. McCutcheon 3.
7-14-19 Tipton, J. W. Hale 2.
28-15-16 Canard, J. Summers 2.
35-15-16 Jee, E. A. Hutchinson 1.
24-16-15 Barnett, W. B. Pine 2.
17-17-15 Johnson, O. S. Eastman 1.
19-17-15 Nave, Martin 1.
5-17-16 Taylor, E. K. Moss 1.
14-17-17 Grayson, Smith 1.
14-18-15 Luckey, Sewell & Winsloe 1.
16-18-15 London, W. H. Allen 1.
25-18-15 McKellop, Reese 1.
10-18-16 Kelley, A. L. Burwell 1.
19-18-16 Moody, Harter 1.
30-18-16 White, A. E. Carder 2.
Shut Down
24-12-19 Hood, Fike & Klatt 1.
19-14-16 Beams, Vdegler 7.
30-14-19 Harris, E. M. Johnson 1.
25-15-16 Perryman, J. W. Curridan 1.
32-15-16 Pouncil, J. L. Powell 2.
30-16-17 Bennett, Korp & Ford 2.
7-17-16 Haynie, Briscoe & Harris 1.
29-17-18 Marshall, E. Coady 1.
29-17-19 Cob, Aggas & Kirker 1.
25-18-15 McKellop, J. A. McEvoy 2.
21-18-16 Tiger, J. L. Towner 5.
Tiger, B. B. Wheeler 1.
29-18-17 Murrell, J. D. Marshall 1.
Trent, J. D. Marshall 1.
23-18-18 Perryman, Aggas & Kirker 1.
Rigs, 3; wells drilling, 32; total, 35.

CREEK COUNTY
14-19-8e Hinton, Kiskaddon et al 2.
13-17-8e Harjo, Black Gold Oil 1.
Bishop, Madden & Madden 2.
32-17-8e Washington, Savoy & Page 2.
17-15-8e Yarhola, Pure Oil 15.
Wilson, Roxana Pet. 11.
Roberts, Eastern Oil 5, 9.
20-15-8e Beaver, Skelly Oil 1-A.
Wilson, Independent O. & G. 1.
28-14-8e Mitchell, Papoose Oil 1.
29-14-8e Robinson, Pure Oil 1.
18-18-9e Jones, Eva Bell Oil 3.
6-18-11 Haynes, Hartman & Williams 1.
18-17-9e Winn, Bu-Vi-Bar Pet. 2.
24-17-10 Talkaney, J. H. Wright 8.
20-16-9e Barnett, Dickerson et al 1.
32-16-10 Deer, Phillips Pet. 3.
31-15-9e Posey, Skelly & Billingslea 1-A.
32-15-10 Hany, Harper et al 1.
33-15-10 Kimble, Simmons & McKeben 1.
6-14-9e Long, Shaffer O. & R. 1.
7-14-9e Yarbrough, C. G. Tibbens 1.
21-14-9e Jones, Skelly Oil 1.
28-14-9e Jones, Billingslea 2.
4-14-10 Greenwood, Tom Kelly et al 1.
20-14-10 Strip, T. B. Slick 1, 2.
Kimble & Reading, Wilcox O. & G. 4, 5.
Elrod, Quinlan & Henry 1.
Stuart, C. F. Noble 2.
21-14-10 Scott, E. L. Kistler et al 2.
14-19-8e Miller, Oklahoma Eastern Oil 1.
Wells Drilling
13-19-8e Robinovitz, U. S. Oil 1.
30-19-8e Williams, J. D. Chronic 1.
11-17-8e Self, Tim Cushing 1.
14-17-8e Johnson, Atlantic Oil 2.
23-17-8e Johnson, Savoy Oil 4.
Grayson, Waite Phillips 3.
24-17-8e Green, Lima Oil 3.
Fife, Dick B. Mason 1.
32-17-8e Washington, Olean Pet. 2, 6, 8.
Artussee, Sartain Bros. 2.
Hamilton, Carter Oil 1.
33-16-8e Larnie, Wolfe Oil Corp. 1.
6-15-7e Emarthia, Oklahoma Nati. Gas 1.
Steele, O. P. & R. Corp. 1.
25-15-7e Stewart, Crosby et al 1.
8-15-8e Robertson, Pulaski Oil 7.
17-15-8e Mitchell, Jomac Oil 4.
Roberts, Eastern Oil 8.
30-15-8e Benjamin, Empire G. & F. 1.
7-14-7e Jack, Pulaski Oil 1.
Stover, Pure Oil 2.
Lewis, Chas. F. Noble 1.
12-14-8e Moran, Skelly Oil 3.
17-14-8e Har-Lar-Char, Shaffer O. & R. 1.
17-19-9e Tucker, Gled O. & G. & Shaffer 1.
31-19-9e Cates, Waite Phillips 1.
14-19-11 Unallotted, Sand Springs Home Oil 1.
14-18-11 Holden, Bennett et al 6.
8-18-12 Unallotted, Wilcox & Witton 1.
19-17-9e Wright, Bu-Vi-Bar 2.
21-17-9e Charcotenne, Wood & Farren 1.
18-17-10 Tahkaney, The Texas Co. 1.
32-17-12 Stewart, Peer Oil et al 1.
6-16-9e Hill, Waite Phillips 1.
Barnett, T. P. C. & O. Co. 1.
21-16-9e Hendrickson, Jackson & Wise 3.
26-16-9e Carr, Jomac Oil 1.
14-16-11 Cowan, T. A. Creekmore 1.
7-16-12 Conger, Jones & Cravens 1.
8-16-12 Townsite Foster et al 1.
Milliken, Suppees et al 5.
7-16-12 Townsite, McFarland 1.
8-16-12 Townsite, W. D. Hall et al 1.
Strip, The Texas Co. 3.
4-15-9e Fahcoconeney, Phillips Pet. 6.
10-15-9e Wisner, T. B. Slick 1.
17-15-9e Wolfe, Turman Oil & Atlantic 1.
29-15-9e Smith, Carter Oil 1.
30-15-9e Foster, Billingslea & Skelly Oil 1.
Unallotted, Tibbens O. & G. 4.
31-15-9e Posey, Skelly & Billingslea 1.
12-14-9e Dixon, Phillips Pet. 1.
13-14-9e Arkorka, Phillips Pet. 1.
24-14-9e McIntosh, Billingslea 1.
27-14-9e Goble, Gypsy Oil 1.
Durant, Devonian Oil 1.
28-14-9e Mayes, Cosden Oil 1.
4-14-10 Strip, Wilson et al 1.
Greenwood, Tom Kelly et al 3.
17-14-10 McNewins, Atlantic Oil 2.
19-14-10 Thompson, Donnelly et al 1.
20-14-10 Kimble & Reading, Wilcox O. & G. Co. 3.
17-15-8e Vassar, The Prairie O. & G. 4.
27-15-10 Snyder, The Prairie O. & G. 3.
Shut Down
14-19-8e Lewis, Gowland et al 1.
23-19-8e Harmon, F. O. Howarth 1.
17-18-7e Starr, Silurian Oil 22.
32-17-8e Washington, Olean Pet. 2.
22-16-8e Wilson, Cortez Oil 6.
Knoll, Laurel Oil 7, 8.
29-16-8e Hawkins, Clayton Lynch et al 1.
16-15-8e Knight, Kanawa Oil 2.
7-14-7e Lewis, Roxana Pet. 1.
32-18-11 Frew, Cross et al.
33-18-12 Watson, The Texas Co. 9.
33-17-10 Tiger, C. J. Wrightsman 1.
13-17-11 McIntosh, A. Sheldon 1-A.
9-16-9e Unallotted, Cameron et al 1.
35-16-10 Froe, Hartman & Williams 1.
7-16-12 Strip, Jordan et al 1.
17-16-12 Funk, B. B. Hartman & Sons 1.
Maxwell, Ireland et al 4.
4-15-9e Wisener, Phillips Pet. 4.
5-15-9e Roger, The Texas Co. 1.
22-15-10 Friday, Cumberland Oil 2.
Rigs, 34; wells drilling, 88; total, 122.

PAWNEE COUNTY
Rigs
1-25-5e Berg, The Prairie O. & G. 1.
31-22-3e Whitewater, Magnolia Pet. 1.
4-22-3e Miller, Magnolia Pet. 7.
Sanders, Magnolia Pet. 3.
5-23-3e Altaffer, Magnolia Pet. 1.
7-23-3e Barnes, Magnolia Pet. 1.
22-23-4t Zoldoskie, Donahoe et al 2.
Choteau, Comar Oil 1.
Zoldoskie, Comar Oil 1.
Choteau, Gypsy Oil 1.
5-23-5e Beck, Haley, Garber & Pulse 1.
10-23-5e Powell, A. D. Krow et al 1.
7-21-7e Strosnider, New England Oil 1.
16-20-6e School, Magnolia Pet. 4.
21-20-6e Lesher, Magnolia Pet. 6.
25-20-9e Townsite, Thomas et al 1.
28-20-9e Unknown, Holmes et al 1.
Wells Drilling
22-22-4e Walker, The Prairie O. & G. 1.
15-20-6e Burton, The Prairie O. & G. 5.
32-23-3e Robodeaux, Magnolia Pet. 1, 4, 5.
33-23-3e Brown, Watchorn O. & G. 1.
Miller, Watchorn O. & G. 7, 8, 10.
Miller, Marland Oil 2, 4.
4-22-3e Diamond, Magnolia Pet. 1.
Miller, Magnolia Pet. 4, 6.
Ely, Magnolia Pet. 2, 3.
Arkeketa, Magnolia Pet. 1.
Sanders, Magnolia Pet. 4.
Miller, Watchorn O. & G. 2, 3, 4, 6.
5-22-3e Altaffer "B," Magnolia Pet. 1, 4.
Wolfe, Magnolia Pet. 2.
Diamond, Watchorn O. & G. 1.
8-22-3e Whitenruie, Magnolia Pet. 1.
9-22-3e Childs, Magnolia Pet. 1.
Droin, Watchorn O. & G. 1.
22-23-4e Lamb, Black Gold Oil 1.
22-23-4e Zoldoskie, Donahoe et al 1.
5-23-5e Phillips, Haley, Garber & Pulse 3.
30-22-5e Box, Beament Oil 1.
10-22-6e Towner, J. H. White et al 1.
36-21-4e Schermerhorn, Independent O. & G. 1.
1-21-5e Hill, T. B. Slick 1.
30-21-5e Hart, J. B. Greaves 2.
31-21-8e Hayden, Adamson et al 1.
8-20-6e Gowding, Magnolia Pet. 1.
21-20-6e Lesher, Magnolia Pet. 4.
22-20-6e Smith, Westerly Oil 1-A, 5, 8.
27-20-6e Ellis, The Texas Co. 2-A.
8-20-7e Fleming, Twin State Oil 5.
9-20-7e Rule, Noble O. & G. 2.
16-20-7e School land, Cosden O. & G. 8, 9, 10.
17-20-7e Pettit, T. E. Mann 3.
Townsite, Reese et al 1.
Pettit, Galvez Oil 6.
Shut Down
4-22-3e Miller, Watchorn Oil 1.
26-23-5e Smith, Turman Oil 1.
25-22-6e Bell, Victor Oil 1.
21-21-7e Armstrong, Nixon & Flight 1.
31-21-8e Havercamp, J. R. Greaves 1-A.
4-20-5e Davis, Flynn, Morgan & Shaffer 1.
21-20-6e Freeman, Josey Oil 2.
28-20-6e White, Davis Drlg. Co. 1.
4-20-7e Townsite, Vick Oil 1.
15-20-7e Morahan, Bailey et al 1.
Rigs, 17; wells drilling, 62; total, 79.

KAY COUNTY
Rigs
20-29-1w Day, The Texas Co. 1.
21-29-1w Duncan, Comar Oil 2.
9-27-1w Geiger, Blackwell O. & G. 2.
Burkholder, Poling & Denny 1.
12-26-2w North, Alcorn Oil 3.
Hubbard, Alcorn Oil 3.
McCullough, Alcorn Oil 2, 3.
13-26-2w School land Magnolia Pet. 1.
22-25-2w Siler, Twin State 2.
34-25-1w Beverlin, Comar Oil 20-W, 22-W.
McKee, Wentz Oil 49.

35-25-1w Ogg, Comar Oil 3-W.
Endicott, Comar Oil 4-W, 9-W.
Wells Drilling
15-29-1w Branine, McComas & Jarvis 1.
17-29-1w Moore, Twin State Oil 1.
21-29-1w Duncan, Comar Oil 2.
McCormick, Comar Oil 1, 2, 3, 4.
22-29-1w Frost, Gypsy Oil 2.
17-29-1e Brockhouser, Vernon O. & G. 2.
15-28-1e Tranary, Grand Island Oil 1.
9-27-1w Cumler, Blackwell O. & G. 1.
Brown, Harris & Haun 1.
18-27-1w Johnson, Una Lee Oil 1.
27-27-3e Lewis, Alcorn Oil 1.
1-26-2w Fitzgerald, Alcorn Oil 1.
12-26-2w North, Alcorn Oil 1.
Hubbard, Alcorn Oil 2.
McCullough, Alcorn Oil 1.
28-26-2w Carr, O-Kansas Oil 1.
15-25-2w Thomas, Alcorn Oil 2.
16-25-2w McFarland, Alcorn Oil 1.
27-25-1w Suiter, McMann Oil 1.
28-25-1w Siler, Louis Freedman 1.
33-25-1w School land, Cosden & Marland Oil 3-A.
34-25-1w Woods. Amerada Pet 40.
Endicott, Pennok Oil 6-D.
Beverlin, Comar Oil 2-W, 7-W, 8-W, 12-W, 15-W, 18-W, 19-W.
McKee, Wentz Oil 48, 50.
McDaniels, Phillips Pet 5.
35-25-1w Ogg, Comar Oil 1-W, 6-W.
Endicott, T. B. Slick 4-E.
Goltry, Carter Oil 11, 12.
9-28 4e Douglas Oil 1.
Wells Shut Down
25-29-2w Sheets, Hickman & Barnhart 1.
21-29-1w Priboth, Comar Oil 2.
11-28-1e Lowery, Okla. Northern O. & G. 1.
16-27-1w Jewell, National Union Oil 2.
13-27-1e School land, P. & R. Corp. 1.
8-26-2w Vannata, Day Oil 1.
4-25-2w Kregel, Clair Smith 1.
16-25-2w Thomas, Alcorn Oil 1.
McFarland, Alcorn Oil 2.
21-25-2w Turk, Alcorn Oil 1.
Thomas, McCaskey & Wentz 1.
Turk, Carter Oil 2.
22-25-2w Siler, Twin State Oil 2.
27-25-2w Simmons, W. E. Brown Oil 1.
26-25-2w Davis, Marland & Embry 1.
27-25-1w Suiter, McMann Oil 5.
30-25-1w Pool, Bailey & Thornton 1.
34-25-1w McDaniels, Phillips Pet. 4.
35-25-1w Ogg, Comar Oil 4-W, 6-W, 7-W.
Endicott, Comar Oil 3-W.
Goltry, Carter Oil 8, 13.
Rigs, 14; wells drilling 66; total 80.

PAYNE AND LINCOLN COUNTIES

Rigs
2-20-2e Catt, Colorado O. & G. Co. 1.
9-19-5e Garr, Garr Oil 3.
7-18-5e Blue, Marland Oil 1.
12-14-6e Townsite, Square Deal Oil 1.
7-14-5e Kalka, Magnolia Pet 1.
10-14-5e Townsite, Davenport O. & G. 1.
12-14-6e Townsite, Union Pet. & Supply 6.
Wells Drilling.
21-19-1w Lewis, Ponca O. & G. 1.
24-19-1w Jackson, Amerada Pet 1.
35-19-5e Laughlin, Josey Oil 5.
23-18-3e Goodno, Deep Rock O. & G. 1.
32-18-4e Payne, Marland & Embry 1.
1-18-5e Laughlin, Home O. & G. 3.
Laughlin, Josey Oil 2-A.
19-17-3e Sutton, Roy Willis et al 1.
23-17-3e Young, Roy Willis et al 1.
5-17.4e Flint, Mulberry Oil 1.
16-17-4e School, Flynn, Morgan & Bailey 1.
1-17-5e Hughes, O'Herin & Hughes 1.
20-17-5e Strong, Grimes et al 1.
23-16-6e Briggs, Day Oil 1.
22-15-2e Harris, F. O. Howarth 1.
32-15-4e Dodrill, Magnolia 1.
36-15-4e Cull, Ruby et al 1.
27-15-5e Manoss, Magnolia Pet 1.
34-15-5e Swartz, Magnolia Pet. 1.
1-15-6e Pinkston, Pure Oil 1.
Sawyer, Gypsy Oil 1.
2-15-6e Pinkston, McMann Oil 1.
12-14-4e Leake, Pure Oil 1.
20-14-4e Fequay, J. C. Cook 1.
2-14-5e Oleson, The Texas Co. 1.
Sokovaty, Magnolia Pet. 1.
3-14-5e Sproleder, Magnolia Pet 1.
Sulovaty, Magnolia Pet. 1.
Bagwell, Southwestern Pet. 1.
7-14-5e Ayers, Magnolia Pet. 1.
12-14-6e Townsite, Dowell et al 2.
Townsite, Hoyt & Wicker 1.
14-13-6e Heinzig, P. & R. Corp. 1.
26-12-2e Dodrill, Eugene Costa et al 1.
12-12-3e Smith, Wilcox O. & G. 1.
8-12-5e Richardson, J. C. Cook 1.
3-14-5e Stout, The Prairie O. & G. 1.
Shut Down
16-20-2e School land, Waite Phillips & Gypsy 1.
6-19-4e Brandon, T. B. Slick 1.
35-19-5e Laughlin, Home Gas 1.
2-18-5e Laughlin, Shaffer O. & k. 11.
16-16-4e Hobson, Wilcox & Oswalt 1.
17-15-3e Powell, Santrock Drlg. Co. 1.
7-15-6e Ford, Skelly Oil 1.
15-15-6e Hubbard, Johndahl 1.
2-14-6e Schubel, Union Pet & Sup. 1.
Townsite, Union Pet. & Supply 2, 8.
12-14-6e Townsite, Atlas Drlg. Co. 1.
7-13-3e Ewing, Douglas Oil 1.
Rigs, 7; wells drilling 50; total, 57.

GARFIELD AND NOBLE COUNTIES

Rigs
2-24-1w Blubaugh "C" Comar Oil 11-W-7-A.
Blubaugh "A," Comar Oil 24-W.
25-23-1w Burnsides, Jankowsky et al 1.
27-22-1e Wentz, Wentz Oil Corp. 1.
29-21-1e Theile, Bolt Pet. 1.
36-23-5e Nelson, Martin & Fleming 1.
11-21-4w Fee, Beople et al 1.
7-21-3w Kellner, Chaffee et al 1.
Wells Drilling
2-24-1w Shawver, Gypsy Oil 34, 90, 92, 93.
Blubaugh "C," 1-W, 3-W, 4-W.
Blubaugh "A," 1-W, 5-W, 8-W, 12-W 13-W, 14-W, 15-W, 17-W, 25-W.
Gaume, Comar Oil 3, 3-W, 8-W, 11-W, 12-W, 15-W.
3-24-1w Pettit, Comar Oil 2-W, 5-W, 10-W, 15-W, 17-W, 19-W.
Ruzek, Comar Oil 3-W.
Ruzek, Blackwell O. & G. 4-D.
11-24-1w Rence, Healdton O. & G. 13-B.
30-24-1w Wilkins, Mid Co. Pet 1-A.
30-21-1w Grim, Twin State Oil 1.
32-20-1e Hall, Helson & Hardin 1.
13-22-4w Walker, Sinclair Oil 17.
24-22-4w Belveal, Sinclair Oil 25.
25-22-4w Hotson, Empire G. & F. 10.
26-22-4w Banterter, Sinclair Oil 2.
Coker, Knox Oil 1.
18-22-3w Hartley, Sinclair Oil 7.
12-22-3w Kisner Sinclair Oil 13.
31-22-3w Morrison, Sinclair Oil 8.
Shut Down
22-24-2w Kurby, Wilkins & Kors 1.
2-24-1w Gaume, Comar Oil 4-W.
9-24-1w Crober, John Herron 1.
14-24-2e Edmonds, Ossenbeck et al 1.
20-24-2e Ray, Ossenbeck et al 1.
15-23-2w Washburn Mid Co. Pet. 13.
Neal, Tidal Osage Oil 15.
1-22-2w White, Frank Kelly et al 1.
4-21-2w Burke, Spencer & Vickery 1.
15-21-2w Sans, Bu-Vi-Bar Pet 1.
12-21-3e Sawyer, Ossenbeck & McMann 1.
17-23-8w Dyche, Jack Reid et al 1.
26-23-7w Cox, Katherine Oil Synd. 1.
6-23-6w Hess, Wier & Wood 1.
16-23-3w School land, Monohan et al 1.
3-22-5w Swinery, J. H. Pringle et al 1.
36-22-4w Heim, Rabbit Foot Oil 10.
Heim, Imo Oil 8.
13-22-3w Bcbtte, Brown & Morris 1.
18-22-3w Schroeder, Roxana Pet. 5.
30-22-3w Crews, Sinclair Oil 10.
2-21-7w Montgomery, Frank Frantz 1.
31-21-5w Vandework, E. A. Summers 1.
12-21-4w Schr.ver, Beople et al 1.
7-20-6w Semrad, Hastie, Smith & Jens Marie Oil 1.
19-20-5w Ray, Summers & Atlantic Oil 1.
13-20-4w Farmel, Summers et al 1.
25-20-4w Rhodes, William King 1.
Rigs, 9; wells drilling, 70; total, 79.

CARTER COUNTY

Rigs
22-1s-3w Brady, Humble O. & R. 1.
27-1s-3w Loftis, Levnat Oil 2.
28-1s-3w Jennings, Templeman & Frantz 2.
Hales, Humble O. & R. 3.
32-1s-3w Johnson, Westhe.mer 1.
33-1s-3w Gillespie,Humble O. & R. 1.
15-2s-3w Howard, Magnolia Pet. 1.
23-2s-3w Lohman, Magnolia Pet. 8.
27-2s-3w Johnson, Page Oil 6.
5-3s-2w Palmer, Schermerhorn & Kirk 2-B.
8-3s-2w Mullen, Coline Oil 2.
McGill, Schermerhorn 2, 3.
Wells Drilling
18-1s-3w Hardin, Magnolia Pet. 1-E.
19-1s-3w Hardin, Magnolia Pet. 1.
27-1s-3w Poland, W. & D. Newstadt, 1.
Poland, Twin State O.l 1.
28-1s-3w McCrary, Tidal Oil 1.
Hale s, Humble O. & R. 1, 2.
Miller, Humble O. & R. 1.
29-1s-3w Spears, Magnolia Pet. 1.
33-1s-3w Lusk, Humble O. & R. 3.
34-1s-3w Fish, Magnolia Pet. 1.
35-1s-3w Williams, Magnolia Pet. 1.
12-2s-3w Pierce, Coline Oil 6.
23-2s-3w Williams, Fitzgerald 3.
25-2s-3w Lahman, Atlant.c Oil 1-A.
26-2s-3w Swartz, Magnolia Pet. 1.
27-2s-3w Hefner, Magnolia Pet 11.
27-2s-3w Fee, C. R. Smith 6.
Williams, Humble O. & R. 1-A.
36-2s-3w Chute, Tidal Oil 4.
32-2s-2w Arington, Magnolia Pet. 2.
5-3s-2w Poland, Southern Pet. 4.
6-3s-2w Bogle, Healdton Pet. 2.
Ledbetter, Coline Oil 1.
9-4s-2w Lowery, Simpson & Fell 1.
5-5s-2w Lewis, Coline Oil 1.
20-5s-1e Criner, Amerada Pet. 5.
Farve, Amerada Pet. 18.
28-5s-1e Clay, Amerada Pet. 3.
F.sh, Amerada Pet. 1, 2.
28-5s-1e Fee, Westheimer 1.
Shut Down
19-1s-3w Movis, McGee 1.
28-1s-3w Jennings, Humble O. & R. 3.
29-1s-3w Miller, Humble O. & R. 1.
22-2s-3w Lohman, Wirt Franklin 2.
27-2s-3w Fee, C. R. Smith 5.
31-2s-3w Palmer, Patsey Kirk Oil 5-A.
8-3s-2w Mullen, Coline Oil 1.
Harrison, Noble Oil 1.
27-3s-2e Brown, Home Oil 1.
21-4s-2w Noble, Skelly Oil 13.
22-4s-2w Okla-Dillar, Humble O. & R. 8.
Dillard, Humble O & R. 9.
16-4s-1e Bishop, Felmlee et al 1.
13-5s-3w Beal, Wickenhiser 1.
Rigs, 13; wells drilling, 46; total, 59.

STEPHENS AND COTTON COUNTIES

Rigs
11-2n-5w Isherwood, Knox Pet. 1.-A.
12-2n-5w Prince, Knox Pet. 1.
18-1s-8w Franklin, Lone Star Gas 5.
22-1s-8w Warner, Kelly-Richburg 1.
Kueng, McBride & Foster 1.
29-1s-8w Weaver, Magnolia Pet. 2.
Wells Drilling
2- 2n-5w Symms, Grant et al 2.
31-1n-8w Malechi, Coline O.l 2.
23-1n-4w Edwards, Russel, Grimes & Atlantic 1.
24-1s-9w Johnson, Magnolia Pet. 5.
Armstrong, Best of All Oil 1-A.
14-1s-8w Kickuk, Magnolia Pet. 1.
18-1s-8w Johnson, Magnolia Pet. 1.
19-1s-8w Bridenthal, Ellis Drlg. Co. 4.
22-1s-8w Worrell, Fisher & Brannon 4.
27-1s-8w Schick, Grigsby Oil 2.
23-1s-8w Hall, Roxana Pet. 2.
30-1s-8w Clarkson, Lone Star Gas 4.
Brown, Lone Star Gas 8.
32-1s-8w Blaydes, Amerada Pet. 11.
33-1s-8w School land, Magnolia Pet. 16.
4-1s-1w Fee, Ballard & shoptaw 1.
11-1s-4w Womack, Magnol.a 1.
28-2s-12w Dyer, Carter et al 1.
11-2s-11w Revelle, Continental Oil 2.
26-2s-11w Fox, Shafter & Sutton 3.
13-2s-8w Mooks, Magnolia Pet. 3.
24-2s-8w Andrea, Magnolia Pet. 2.
36-2s-8w Enloe, Wells, Pearson & Smith 1.
3-2s-5w Webb, Magnolia Pet. 6.
11-2s-5w Martin, Magnolia Pet. 2.
11-3s-8w Beale, C. Starr 1.
14-3s-5w Reed, Lone Star Gas 2.
Shut Down
23-1s-10 Bondurant, A. S. Peard 4.
13-1s-9w Schove, Magnolia Pet. 6.
25-1s-9w Edmundson, Carter Oil 2.
13-2s-8w McMaster, Anderson & Shoemaker 1.
15-2s-7w Toney, Magnolia Pet. 2.
15-3s 5w Bohannand, Lone Star Gas 1.
Rigs, 6; wells drilling, 33; total, 39.

MISCELLANEOUS COUNTIES

Rigs
Grant County—
22-27-3w Lane, Blackwell O. & G. 2-A.
Woodward County—
4-23-17w Nordyke, Diamond Drlg Co. 1
Kingfisher County—
7-19- 5w James, Jens Marie et al 1.
Logan County—
33-18- 3w Quier, Haley & Pioneer Pet. 1.
35-17- 4w Field, McMunn & Nixon 1.
Pontotoc County—
33- 5n- 8e Shields, Homa-Okla Oil 1.
3 4n- 6e Burthrop, American O. & R. 1.
Canadian County—
29-11 - 7w Sanders, Wilcox et al 1.
Garvin County—
13- 1n- 3w Wyatt, Magnolia Pet. 5.
Grady County—
31-10 - 8w Unknown, Hawkins & Young 1.
10- 5n- 8w Maddox, Cockle Burr Oil 1.
25- 5n- 8w Hill, Magnolia Pet. 2.
26- 4n- 6w Pursley, Nash et al 1.
35- 3n- 5w Lindsey, Gant et al 2.
Comanche County—
10 1n- 9w Roy, A. B. Cook 1.
25- 1n- 9w Harris, Magnolia Pet. 10.
Jefferson County—
7- 5s- 9w Unknown, W. E. Norton 1.
4- 6s- 5w Brown, Ely et al 1.
Wells Drilling
Grant County—
29-29- 4w Ridings, Phillips Pet. 1.
22-27- 3w Stewart, Western States 4-A.
Alfalfa County—
21-27-10w Watts, McGinnis & Ward 1.
Major County—
9-22- 9w Ratcliff, Bradstreet Oil 1.
Logan County—
5-19- 2w Chm, Gilliland Oil 1.
28-16- 1w Lair, Blackford O. & G. 1.
23-15- 1e Pritchard, Magnolia Pet. 1.
Kingfisher County—
27-17- 5w Sickerson, Carson et al 1.
Pontotoc County—
32- 5n- 5e Brown, Brinson et al 1.
34- 5n- 6e Roy, Bowles & Smith 1.
19- 5n- 7e Dener, Harper et al 1.
24- 4n- 4e Floyd, C. J. Wrightsman 1.
3- 4n- 6e McDaniel, American O. & R. 1.
16- 4n- 6e Curry, American O. & R. 1.
18- 4n- 6e McClure, Bryan & Gillett 1.
27- 4n- 6e Parry, Pilgrim Pet. 1.
31- 4n- 6e Harden, T. P. C. & O. Co. 1.
14- 4n- 7e Norris & Beck, Howarth O. & G. 1.
28- 4n- 7e Faulkner, Hughes et al 1.
6- 3n- 7e Lloyd & Smith 1.
Mayes County—
26-19-18 Coats, C. E. Campbell 1.
Canadian County—
34-13n- 9w Dawson, Thos. Revelle 1.
Pottawatomie County—
18- 7e- 5e Y.nson, Maude Oil Products 1.
9- 5n- 3e Ball, Day Oil 1.
Garvin County—
11- 1n- 3w Hervey, Magnolia Pet. 1-B
14- 1- 3w Jones Magnolia Pet. 10.
Mrys-Newberry, Magnolia Pet. 4.
16- 1n- 3w Harris, Magnolia Pet. 5.
35- 1n- 3w Riddle, T. P. C. & O. Co. 1.
8- 1n- 2w Franklin, Tidal Osage Oil 1.
Roger Mills County—
3-13-26w Unknown, Trio Oil 1.
Custer County—
24-13-14w Unknown, Hoover Oil 1.
Beckham County—
24- 9n-25w Unknown, W. H. Sheldon 1.
35- 9n-24w Brown, Steve Nelson 1.
Greer County—
3- 7-22w Johnson, Neal et al 1.
4- 3n-22w Van Vector, Boso & Terrill 1.
Kiowa County—
13-7n-16w Unknown, Alcorn Oil 1.
20- 7n-16w Williams, Connor et al 1.
Caddo County—
32- 6n- 9w Day English Drlg. Co. 1.
Grady County—
26- 5n- 8w Smith, Sun Ray et al 2.
35- 5n- 8w McCaughtry, Hagerling et al 2.
22- 5n- 7w Unknown, Badgett & Hughes 2.
2- 4n- 8w Dryden, Carter Oil 1.
11- 4n- 8w Williams, Powell-Briscoe 1.
28- 3n- 5w Pearcay, Magnolia Pet. 1.
Comanche County—
25- 1n-9w Ketchum, Humble O. & R. 6.
Jackson County—
15- 1s-23w Snodgrass, J. R. Abernathy 1.
Jefferson County—
25- 6s- 6w Spring, Magnolia Pet. 1.
31- 6s- 5w Seay, Cameron & Anderson 1.
33- 7s- 6w Standfield, Landis et al 1.
Latimer County—
10- 6n-21e Young, J. S. Cochran 1.
Johnson County—
7- 4e- 4e Trootes, Washita O. & G. 1.
Shut Down
LoveCounty—
29- 6s- 3e Starritt, Simms Oil 1.
Grant Coun'—
8-27 - 8w Moon, Midwest & Gulf 1.
30-27 - 4w Fuss, Frank Traves et al 1.
2-27 - 3w Webb, Marland Oil 1.
14-27 - 3w Howell, Western States Oil 1.
27-27 - 3w Lane, Western States Oil 1.
20-26 - 4w Edwards, Embry & Leright 1.
Woods County—
10-25 -15w Van Buskirk, Victor Oil 1.
Alfalfa County—
23-24 -11w Turnbull, Armstrong, Henley & Pettley 1.
Ellis County—
32-24 -24w Meegan, Utility O. & G. 1.
2-21 -24w James, Gage Oil 1.
10-21 -24w Cross, Utility O. & G. 1.
22-20 -24w Roper, Chicago Okla Oil 1.
Major County—
36-22 -14w Cheyenne Basin, Texas Prod Co. 1.
36-21 -11w Gray, Frantz & Slick 1.
Woodward County—
34-20 -20 w Bell, Beard O. & G. 1.
Logan County—
32-19 - 3w Newman, Skelly Oil 1.
28-18 - 4w More, Franklin Oil Assn. 1.
9-18 - 2w Wyatt, Behoma Oil 1.
36-15 - 2w Johnson, Oklahoma Drlg. 1.
Dewey County—
7-18 -15w Chronister, Meyers et al 1.
22-16 -18 Elders, A. D. Morton 1.
Kingfisher County—
30-16 - 9w Burson, Pansey O. & G. 1.
31-15 - 7w Lewis, F. & N. Oil 1.
17-15 - 6w Creaves, Chi Oil Co. & Nichlos 1.
14-17 - 5w McCord, Cas.ng Royalty Co. 1.
Cimmaron County—
2- 5n- 5e Schook, Campbell & Riley 1.
16- 1n- 7e Wells Ranch, Beaver O. & G. 1.
Beaver County—
33- 5n-28e Unknown, Gates Valley Oil 1.
Blaine County—
21-15 -10w Eklemeier, Okomo Oil 1.
26-15 -12w Dickerson, Thompson 1.
Pottawatomie County—
4- 5n- 5e McFarland, Riverside Oil 1.
13-11 - 3e Floyd, Gwynnup et al 1.
13-10 - 2e Howell, Ossie Oil 1.
25-10 - 4e Midgett, North American Oil 1.
24- 8 - 4e Stoner, Maude Oil Products 1.
19- 7 - 4e Neghan, McMann Oil 1.
10- 6n- 2e McCahey, Davis Detrick 1.
4- 5n- 5e Fiddler, Halmond Osmond et al 1.
Pontotoc County—
31- 5n- 5e Lewis, La Salle et al 1.
5- 4n- 5e Starritt, Craig et al 1.
17- 4n- 6e Witherspoon, American O. & R. 2.
34- 4n- 6e Norris, Smith & Lancaster 1.
15- 3n- 6e Hays, Galloway et al 1.
Canadian County—
2-13 - 8w Setter, Carrol & Swiechar 1.
Oklahoma County—
36-11 - 3w School land, Firestone Oil 1.
Cleveland County—
31-10 - 4w Holland, Garr Oil 1.
Garvin County—
21- 4n- 1w Florence, Bedman et al 1.
10 -3n -3e Hattle, Heath & Bauman 1.
13-2n- 3e Dellbeck, Goldeline Oil 1.
11- n- 3w Harkreader, Concord Oil 5.
18- 1n- 3w Derdyn, Simms Oil 1.
18- 1n- 1e Richardson, Bendern et al 1.
9- 2n- 2e Gibson, Black Pet. 1.
Roger Mills County—
15-15 -26w McClure, Twin Hill Oil 1.
Beckham County—
6- 9n- 24w Burkholder, J. A. Pringle 1.
19- 8n-21w Van Vector, Kadane et al 1.
Washita County—
9- 8n- 15w Prettears, McCoy et al 1.
Greer County—
17- 7n-21w Unknown, Morton & Neal 1.
Kiowa County—
8- 7n-17w Countryman, Aubyme 1.
Grady County—
19- 7n- 5w Cook, Langston O. & G. Co. 1.
14- 5n- 8w Irwin, Cotton Patch Oil 1.
23- 5n- 8w Edmondson, Skelly Oil 1.
16- 4n- 6w Bryant, Roy Nash et al 1.
Jackson County—
36- 2n-23w Unknown, J. D. Wade 1.
Comanche County—
24- 2n-10w Cox, Cherry & Cousb 1.
29- 1n-12w Bently, Bently et al 1.
Tillman County—
11- 1n-17w Faufkner, H. S. & H. Oil 1.
10- 4s-10w Cousb, A. E. Spears 1.
Jefferson County—
31- 4s- 8w Anderson, Counell Oil 1.
21- 5s- 6w Cowden, Tarkington & Kelsey 1.
34- 5s- 6w Major, Barker et al 1.
36- 5s- 4w Woodwarth, Godley Oil 1.
18- 6s- 5w Grayson, Heydrick et al 1.
29- 6s- 5w Seay, Humble O. & R. 1.
4- 7s- 5w Seay, Cherry & Cousb 1.
Murray County—
2- 2n- 5e Fine, Black & Thompson 1.
Atoka County—
1- 2s- 9e Fee, J. P. Torrence et al 1.
7- 2s- 9e Wild, McPherson 1.
28- 2s- 9e Underwood, Wapanucka Dev. Co. 1.
17- 4s-11e Dabney, Hanson et al 1.
Marshall County—
24- 5s- 5e Rice, Reese et al 1.
Johnson County—
36- 5s- 6e Holden, United 8 Oil 1.
Love County—
11- 7s- 2e Wilson, Driller Synd. Oil 1.
Bryan County—
26- 7s-11e Hampton, Alexander 1.
Latimer County—
7- 5n-18e Hunt, P. & F. Pet. 1.
16- 6n-21e
LeFlore County—
17- 5n-25e Lucas, H. Randall 1.
Pittsburg County—
29- 6n-13e Townsend, E. T. Richards 1.
Haskell County—
3- 9n-18e Phillips, Haskell Drlg Co. 1.
27- 9n-18e Curry, J. D. Clark 1.
4- 9n-20e Dawbre, H. U. Bartlett 1.
Rigs, 18; wells drilling, 143; total, 161

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Anderson	3	181	6	6
Bourbon	4	0	8	1
Chautauqua-Elk	7	100	3	1
Cowley	5	4,181	2	6
Greenwood	20	2,535	6	1
Montgomery	13	100	9	1
Neosho	3	0	1	1
Wilson	3	0	3	0
Miscellaneous	6	275	4	0
Total January	65	7,362	21	1
Total December	124	4,304	79	16
Difference	61	3,058	48	6

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Tri.
Butler	3	23	26
Chautauqua-Elk	4	30	34
Cowley	20	70	90
Greenwood	30	51	81
Montgomery	0	33	33
Russell	1	11	12
Sumner	3	17	20
Wilson	6	10	16
Woodson	3	10	13
Miscellaneous	14	97	111
Total January	78	360	438
Total December	71	368	439
Difference	7	2	1

ANDERSON COUNTY

WELLS COMPLETED

9-22-19 Strain, Strain Oil 10 6
8-21-20 Melcher, T. W. Reed et al 2... 140
15-21-20 Ware, Albert H. Keys 17. 85

Wells completed 3
Prdouction 181

BOURBON COUNTY

18-24-22 Eager, Burbonola Oil 15. ..... dry
17-24-22 Hounens, B. M. Slone et al 1.. gas
24-24-21 Emtzuinger, Grant Colby 1.... dry
11-24-21 Fee, Frederick Hounens 1.... dry

Wells completed 4
Dry 1
Gas 1
Gas production 500,000

CHAUTAUQUA AND ELK COUNTIES

25-33-11 O'Neil Ranch, Rigdon & Brusen 129 60
O'Neil Ranch, Rigdon & Brusen 130 60
31-34-10 Houston,Noble O. & G. 1. .... gas
24-33-10 Holyrod, H. P. Glidden 1..... dry
4-29-10 Baughman, Imperial Drlg. Co. 1. ..... dry

16-34- 9e Fisher, T. B. Slick 1. ..... gas
15-31-12 McCurry, Gibson et al 1. .... dry

Wells completed 7
Production 100
Dry 3
Gas 1
Gas production..... 2,000,000

COWLEY COUNTY

19-30- 5e Dunbar, Alcorn Oil 1. ..... dry
1-35- 7e Olsen, T. B. Slick 7. 25
18-31- 5e Shannon, Arkansas River Gas 1. ..... dry
17-33- 3e Thurlow, Waite Phillips 1.... 350
19-33- 3e Backus, Waite Phillips 2. 976
20-33- 3e Johnson, Waite Phillips 5.... 2830

Wells completed 6
Production 4181
Dry 2

GREENWOOD COUNTY

13-22-10 Derbyshire, Simmons & Burke 1 75
6-25-13 Gilroy, Bisanno et al 4. 50
24-26-9e Welshing, Landers et al 1..... 150
22-22-11 Cravet, Phillips Pet. 2. ..... dry
23-22-11 Kipfer, Ward McGinnis 1. 180
23-22-11 De Malorie, York State Oil &.. 30
23-22-9e Teeter, McGinnis & Bittler 2... 350
23-22-9e Kipfer, Syndicate Oil 1..... 250
18-22-10 Kipfer, Syndicate Oil 7..... 300
18-22-10 Browning, Sinclair Oil 7..... dry
22-22-11 Bersie, Henderson, Holden & Millikin 3 150
15-23-9e Teeter, Phillips Pet. 2. 200
Teeter, McGinnis & Bittler 1... 125
9-23-13 Souder, Theta Oil 8. ..... dry
13-22-10 Sowder, O. J. Connell et al 1.. dry
24-22-13 Kraft, Braden Bros. 3. ..... dry
21-23-10 Martindale, Mid-Kansas Oil 13. 390
17-24-9e Wiggins, Carter Oil 1. ..... dry
19-24-13 Morris, Kittle et al 1. 75
19-25-9e Madd, Mid-Kansas Oil 6. 200
15-26-11 Kiser, T. E. Miller 1. ..... dry

Wells completed 20
Production 2525
Dry 6

MONTGOMERY COUNTY

21-35-15 Reed, G. W. Connelly 1. ..... dry
8-34-17 Barber, Van Vleck & Graham 14. ..... gas
7-34-17 Grand, L. O. Haines 1. ..... gas
19-31-16 Clark, Pennant Oil & Goldrick 1. ..... dry
25-34-13 Patterson, H. R. Nelson et al 2. gas
2-33-14 Kick, Smith & Thomas 1. ... dry
12-33-16 Thomas, Roth & Faurot 1. ... dry
Good, Harwood & Hazlett 2. .. dry
Thompson, Homer Lamb 1. ... dry
Good, Empire G. & F. 2. .... dry
19-34-16 Ingram, Fisher & Lauck 1. ... dry
22-32-14 Cox, Hobson et al 1. ..... dry
12-33-16 Thompson, Wilkins et al 3. ... 100

Wells completed 13
Production 100
Dry 9
Gas 3
Gas prodtion 10,225,000

NEOSHO COUNTY

16-27-19 Stolzing, W. M. Wells 1. .... gas
18-27-20 Claus, Rotary Oil 9. ..... gas
9-27-20 Haynes, Shaffer O. & R. 1. ... dry

Wells completed 3
Dry 1
Gas 2
Gas production 520,000

WILSON COUNTY

12-28-17 Fee, A. E. Willis 5..... dry
5-29-27 Stevent, Franklin Oil 1..... dry
23-30-15 Edwards, Bryan & Stinson 1... dry

Wells completed 3
Dry 3

MISCELLANEOUS COUNTIES

Allen County—
19-24-21 Booth Bros., Ed Henninger 2.. dry
16-26-18 McFarren, John J. Wells 8. .. 25
Labette County—
26-32-19 Marrett, Whitney Lewis et al 1 dry
Russell County—
8-12-15w Oswald, Streeter & Stearns 2 . 250
Sumner County—
29-34 2e Works, Phillips Pet 1. ..... dry
Marion County—
31-20- 4e Carpenter, Leeward Pet. 1.... dry

Wells completed 6
Production 275
Dry 4

BUTLER COUNTY
Rigs

17-24- 4e King, Connell, Mathews & Ralston 1.
23-24-4e Penner, Vickers Pet. 1.
23-26-6e Palmer, Foraker et al 1.
Wells Drilling
21-24-3e Harder, Walter Hoyt 1.
26-24-3e Brenner, Sanford, Garden & Gliddon 1.
5-25-4e Fitch, Phillips Pet. 1.
27-28-5e Meyers, Ramsey et al 2.
Meyers, Shawver & Strosnyder 5.
Shut Down
21-24-4e Maxwell, Potwin O. & G. 1.
23-24-4e Barkemeyer, Robinson et al 1.
19-24-5e Joseph, Kightlinger et al 1.
27-24-6e Burson, G. Frank & Imperial Oil 1.
23-24-8e Lample, Tom Miller 1.
1-25-3e Brainerd, E. B. Shawver et al 1.
19-26-3e Glancy, Hawkins 1.
7-26-5e Higgins, Allen et al 2.
26-26-5e Sluss, Travis et al 1.
32-26-6e Palmer, Sparta Oil 1.
24-27-4e Weidline, Weidline et al 1.
32-27-6e Sterd, Wentz et al 1.
33-27-7e Hamilton, Beckers et al 1.
32-28-5e Crawley, H. B. Garden 2.
32-28-6e Pettit, John Sharp 1.
30-29-3e Robins, Walters Pet. 1.
29-29-5e Clevenger, Shawver et al 1.
12-29-6e Lammonyon, Tobins et al 1.
Rigs, 3; Wells drilling, 23; total 26.

CHAUTAUQUA-ELK COUNTIES
Rigs

16-34-9e Kinnmen, J. A. Brauk et al 1.
12-29-8e Porter, C. E. Roth & Co. 8.
12-29-8e Hanna, C. E. Roth et al 3.
7-31-11 Knalbe, R. G. Gillespie 1.
Wells Drilling
32-32-10 Wiggam, The Texas Co. 1.
17-32-11 Kingston, Denman Bros. 1.
16-32-13 Hoover, Glidden Oil 1.
2-33-8e Shaver, Ajax Drlg. Co. 1.
24-34-9e Moffitt, Page et al 1.
8-34-10 Wilson, Denman Bros. 1.
4-34-13 Carra, Victor Martin 1.
7-35-13 Albright, Noble O. & G. 1.
13-29-8e Porter, Empire G. & F. Co. 2.
22-29-9e Smith, Ohio Fuel Oil 2.
28-29-9e Wheeler, Denman et al 2.
10-30-9e Kyser, Imperial Drlg. Co. 1
33-30-13 Bailey, Shaffer O. & R. 1.
21-31-9e Stiles, Triplet Oil 1.
Shut Down
24-28-11 Holliday, Jones et al 1.
3-30-9e Denton, Watchorn O. & G. 5.
5-30-9e McIntyre, Blaxter & Mitchell 1.
19-30-9e Packard, Ritchey & Moore 1.
35-30-9e Lawyer, Clark Oil 1.
30-30-11 Fickell, Pennok Oil 2.
30-30-13 Sharp, Curtis et al 1.
22-31-8e Ewers, Denman Bros. 5.
21-31-9e Hand, Anderson Bros. 1.
5-31-11 Osborne, Crawford & Reagan 1.
33-31-12 Hughes, Southwestern Gas 1.
1-33-8e Reed, Hatlock et al 1.
5-33-10 Humphrey, Dunn, et al 1.
11-33-10 Chamberlain, Fisher Oil 2.
5-33-12 Fish, Garner et al 1.
3-35-8e Dale, Buck-Shuler & Winters 1.
Rigs, 4; wells drilling, 30; total, 34.

COWLEY COUNTY
Rigs

1-30-7e Mahanna, Arkansas Fuel Oil 1.
6-30-8e Morhamma, Paul Trees 2.
10-31-3e Shaffer, Trees Oil 2.
10-31-3e Clark, Arkansas Fuel Oil 2.
30-31-5e Coffey, C. E. Roth 1.
13-32-5e Staggers, The Texas Co. 1.
19-32-3e Waite, Carter Oil 1-A.
Carson, T. B. Slick 1-A.
24-32-4e Shannon, Gypsy Oil 7.
Lewis, J. A. Hull 1-B.
7-32-5e Crostley, Arkansas Fuel Oil 5.
12-32-6e Estus, Trees Oil & Richardson 1.
3-33-3e Orr, Marland Oil 1.
9-33-3e Johnson, Waite Phillips 2.
Spruen, Roxana Pet. 2.
10-33-3e Bower, Marland Oil 2, 3.
Spruen, Roxana Pet. 3, 4.
20-33-3e Wertman, Waite Phillips & Marland Oil 11.
Wells Drilling
11-30-4e Joslin, Derby Oil 1.
24-30-6e Ward, Chas. Christy 1.
31-30-6e Crouch, Lewis Oil 4.
Crouch, Titus et al 4.
11-31-3e Clark, Arkansas Fuel Oil 1.
14-31-4e Sherwood, Trees Oil 1.
35-31-4e McKnab, Indian Ter. Oil 1.
5-31-6e Eastman, Shawver & Sutter 1.
Eastman, Martin & Wilson 4.
6-31-6e Eastman, Empire G. & F. 4.
21-31-6e Eddie, Marland Oil 1.
19-32-3e Waite, Carter Oil 1.
Conrad, T. B. Slick et al 1.
Waite, T. B. Slick et al 1.
26-32-3e Tinker, Marland Oil 1.
30-32-3e Nevitt, Marland Oil 1.
3-32-4e McKnab, I. T. I. Oil 1.
13-32-4e Spengler, Sinclair Oil 1.
Rockwell, Marland & Neely 1.
Lierman, Marland Oil 1.
24-32-4e Shannon, Gypsy Oil 3, 4, 5, 6.
Kukuk, J. A. Hull 9, 10, 11.
Wallace, J. A. Hull 9.
Ditmer, J. A. Hull 5, 6, 7.
25-32-4e Binger, White Eagle O. & R. 1.
9-33-3e Johnson, Waite Phillipe 1.
Spruen, Roxana Pet. 1.
Graham, Marland Oil 2, 3, 4, 5.
10-33-3e Wright, Marland Oil 1, 2, 3.
Bower, Marland Oil 1.
Spruen, Roxana Pet. 1, 2.
17-33-3e Thurlow, Wentz Oil 1.
18-33-3e Patterson, Waite Phillips 1.
19-33-3e Heshet, T. B. Slick & Marland Oil 1
20-33-3e Glasgow, Waite Phillips & Marland Oil 1, 2, 5.
Wertman, Waite Phillips & Marland Oil 7, 8, 9, 10.
Johnson, Waite Phillips & Marland Oil 4, 5.
21-33-3e Snyder, Waite Phillips & Marland Oil 1.
29-33-3e Beatty, Waite Phillips & Marland Oil 1.
Hansen, Waite Phillips 1.
Johnson-True, Waite Phillips 1.
34-33-3e Shehan, Marland Oil 1.
7-33-7e Reding, Briggs & Ritchey 1.
7-34-3e Tuttle, Waite Phillips 1.
17-34-3e Baird, Shawver & Elwell 1.
33-34-3e Bocastow, Rich et al 1.
32-34-4e Whitney, Kan-O-Tex Refg. 1.
10-35-5e Warren, Trees Oil 1.
Wells Shut Down
16-30-4e Starkey, C. E. Ash 1.
33-30-7e Clover, Scott et al 1.
4-30-8e Hanna, C. E. Roth et al 4.
26-31-3e McKinley, Arkansas Fuel Oil 1.
31-32-4e Weir, Day & Bunnell 1.
34-32-4e Poor Farm, Chas. E. Dye et al 1.
7-32-5e Crostley, Arkansas Fuel Oil 3.
24-33-6e Sandstrum, Torrence & Torrence 2.
4-33-7e Countryman, Forrester et al 1.
35-34-3e De Baird, A. D. Morton et al 1.
5-35-5e Sterling, Springstad & Overlease 1.
Rigs, 20; wells drilling, 78; total, 98.

GREENWOOD COUNTY
Rigs

17-22-10 Browning, D. M. Rhodes & Theta Oil 9.
32-22-10 Barnard, Rhodes & Able 1.
22-22-11 Bersie, Henderson & Holden & Millikin 4.
28-22-11 Clark, Phillips Pet. 8.
32-22-11 De Malorie, York State Oil 7.
6-22-12 Jones, Skelly Oil 3.
15-23-9e Teeter, McGinnis & Bittler 4, 5.
16-23-9e Teeter, Empire G. & F. 17.
23-23-10 Allen, Mid-Kansas Oil 15.
29-23-10 Thrall, Mission Oil & Roth 23.
31-23-10 Martindale, Mid-Kansas Oil 15, 16.
32-23-10 McKee, Phillips Pet. 7, 17, 18, 19.
5-23-11 Seeley, Phillips Pet. 12.
8-23-11 Clopton, Empire G. & F. 12.
4-23-13 Inthurm, Skelly Oil 1.
20-23-13 Sowder, Arkansas Fuel Oil 2.
1-24-9e Cartwright, Roth & Mission Oil 5.
23-24-9e Wiggins, Roger & Mission 3.
21-24-12 Johnson, Poihamus et al 1.
16-24-13 Blackwell, Rhodes & Able 1.
28-24-13 Johnson, Kittle et al 1.
3-25-9e Hover, Phillips Pet. 5.
4-25-9e Hurley, Pure Oil 3.
28-26-13 Ingersol, Maitland Oil 1.
14-24-9e Hellman, The Prairie Oil 8.
Wells Drilling
13-22-10 Warrensburg, Skelly Oil 1.
17-22-10 Browning, Rhodes & Able 8.
18-22-10 Browning, Rhodes & Able 5.
20-22-10 Browning, Sinclair Oil 8.
30-22-10 Prather, Titus et al 1.
7-22-11 Malone & Souder, Davis & Alyard 1.
22-22-11 South, Tidal Oil 4.
32-22-11 O'Neil, York State Oil 5.
1-23-9e Shambaugh, Youker et al 1.
2-23-9e Green, Transcontinental Oil 2.
Hartley, Reverly, et al 1.
10-23-9e Green, Rodgers-Bittler et al 1.
15-23-9e Teeter, Phillips Pet. 3.
Teeter, Skelly Oil 1, 2, 3.
Teeter, McGinnis & Bittler 3.
16-23-9e Teeter, Empire G. & F. 16.
31-23-10 Martindale, Mid-Kansas Oil 14.
26-23-11 Ellis, Eugenia O. & G. 1.
20-23-13 Gribblin, R. G. Gillespie 8.
27-24-9e Hill, Fontaine et al 1.
6-24-10 Cartwright, Federal Oil 2, 3.
23-24-10 Edwards, John Edwards et al 1.
15-24-12 Moran, Omar Oil 1.
21-24-13 Morris, George W. Moore et al 1.
31-24-13 Cox, Charles Christy 1.
12-25-8e Beckett, Roth & Farout 3.
9-25-9e Gregg-Coulter, Lewis Oil 1.
19-25-9e Ladd, Mid-Kansas Oil 5.
30-25-13 Brown, Cory et al 1.
13-26-9e Life Est., Beacon Oil 1.
28-26-9e Kline, Magnolia Pet. 3.
Shut Down
13-22-10 Derbyshire, Pryor & Lockhart 2.
15-23-9e Teeter, Skelly Oil 4.
Teeter, Skelly Oil & Emerald Oil 1.
28-23-10 Thrall, Mission Oil & Roth 42.
29-23-10 Thrall, Mission Oil 44.
Thrall, Mission Oil 2.
32-23-10 Thrall, Mission Oil 5.
15-23-13 Schneider, Shaffer & Howell 11.
34-24-9e Marshall, Poihamus et al 13.
15-24-12 Johnson, Skelly Oil 3.
12-25-8e Beckett, Roth & Farout 2.
7-25-9e Wilkinson, S. M. Griggs 1.
16-25-9e Coulter, Rodgers et al 2.
27-25-9e Sallyards, Duncan et al 1.
14-26-10 Norman, John Jackson 1.
33-25-10 Bagger, Kiskaddon & Farr 1.
18-28-9e Dixon, Jamison et al 1.
Rigs, 30; wells drilling, 51; total, 81.

MONTGOMERY COUNTY
Wells Drilling

20-31-15 Hudiburg, Orbin et al 1.
1-31-16 Dougherty, Hazlett & Wells 1.
2-32-13 Neiman, Dunn et al 1.
13-32-14 Sloan, Galbraith 1.
35-32-14 Drybread, Irish et al 1.
5-32-16 Brinkman, T. R. Cowell 1.
35-32-16 Wybenger, Sloom et al 1.
Riddins, Hancock Drlg. Co. 1.
29-32-17 Hellums, Earl & Overfield 1.
23-33-14 Miller, J. F. Mergen et al 1.
12-33-16 Palmer, Superior Oil 1.
Good, Cross Prod. Co. 2, 3.
30-33-16 Davis, J. E. Weible et al 1.
6-33-17 Howard, Stryker et al 1.
9-34-14 Eaton, R. G. Gillespie 1.
31-34-15 Reed, Connelly et al 1.
12-35-14 Van Deent, Orlando Pet. 1.
5-35-15 Taylor, Keystone Oil 1.
12-35-16 Wilson, Tex-O-Kan Oil 1.
Wells Shut Down
31-31-14 Faler, Remler et al 1.
24-33-13 Brooks, Steinberger Brothers 1.
25-33-14 Mason, Vanniman et al 1.
11-33-16 Zutz, Wilkins et al 1.
13-33-16 Remington, Reed & King 1.
35-33-16 Felts, Voise & Tabor 1.
3-33-17 Bellairs, Coffeyville Brick Co. 1.
4-33-17 Hall, Townsell et al 1.
7-33-17 Rogell, Harwood & Hazlett 1.
30-33-17 Bunk, Wolf & Brown 1.
28-34-14 Owens, Phillips Pet. 1.
1-35-16 City of Coffeyville, Ed Karns 1.
4-35-17 Walker, Galloway & Roberts 1.
Rigs, 0; wells drilling, 33; total, 33.

RUSSELL COUNTY
Rigs

18-12-15 Oswald, Skelly Oil 1.
Wells Drilling
5-12-15 Sutton, Derby et al 1.
8-12-15 Oswald, Streeter & Stearns 1-A.
Oswald, Valerius O. & G. 3.
17-12-15 Oswald-Valerius, Valerius O. & G. 3.
36-15-13 Seller, Alcorn Oil 1.
Shut Down
13-11-13 Poposhill, Sawtelle et al 1.
23-12-11 Dic, Ritchey & Moore 1.
33-12-11 Cooper, Pomeroy et al 1.
24-13-13 Harbaugh, Lee Bullock et al 1.
9-14-15 Mermis, Producers & Refiners 1.
13-13-14 Hill, The Prairie Oil 1.
Rigs, 1; wells drilling, 11; total, 12.

SUMNER COUNTY
Rigs

22-34-2e Tiessen, Marland Ref. 1.
23-34-2e Mieran, Gypsy Oil 1.
14-35-1e Hertzel, National Ref. 1.
Wells Drilling
8-30-2e Stubbs Land Co., McKnab & Burt 1.
16-30-1w Hitchcock, Champlin Ref. 1.
17-30-1w Kraft, Champlin Refg. 1.
12-30-4w Smith, Phillips Pet. 1.
16-31-2e Rutz, Cosden Oil 1.
29-32-2e Veail, Phillips Pet. 1.
26-33-1e Pruett, Waite Phillips 1.
25-33-2e Wood, Brady Brothers 1.
14-34-2e Melk, Marland Refg. 1.
32-34-2e Lindsey, Marland Rfg. 1.
26-34-2e Warner, Marland Refg. 1.
34-34-1w Hayes, Shawver & Sutter 1.
6-35-1e Milligan, Tidal Oil 1.
Shut Down
7-30-1w Slutter, Ellis et al 1.
16-30-1w Hitchcock, Champlin Refg. 2.
9-32-1e Harkins, Waite Phillips 1.
16-35-1e Stewart, National Union Oil 1.
Rigs, 3; wells drilling, 17; total, 20.

WILSON COUNTY
Wells Drilling

2-27-14e Brown, Rhodes & French 1.
2-28-13 Newman, Gwinnup et al 1.
6-28-16 Prunty, Noble Oil 1.
31-29-17 Ford, Callahan et al 1.
27-30-15 Blair, H. P. Glidden 1.
Shut Down
24-29-13 Claybome, Gillock et al 1.
22-29-16 Thompson, Price et al 1.
31-30-14 Asherhaft, Kors et al 1.
29-30-17 Smalley, West & Williams 1.
32-30-17 Thompson, Hauck & Devors et al 1.
Rigs, 0; wells drilling, 10; total, 10.

WOODSON COUNTY
Rigs

32-23-15 Weide, Rodgers & Hinkle 6.
1-24-14 Weide, Arkansas Fuel Oil 1.
2-24-14 Weide, Iowa-Kansas Dev. 3.
Wells Drilling
23-23-13 Bahr, Peerless Oil 8.
29-23-15 Guy, Parish et al 1.
32-23-15 Weide, Rodgers & Hinkle 5.
13-24-13 Rhea "C." Skelly Oil 1.
22-25-14 Fry, Curtis Oil 1.
Shut Down
23-23-13 Hessler, Empire G. & F. 2.
31-23-15 Weide, Franklin Oil 1.
2-24-14 Allen, Iowa-Kansas Dev. 2.
4-26-14 Lauber, Herman & Oglesby 1.
29-26-17 Clark, Equity Oil 1.
Rigs, 3; wells drilling, 10; total, 13.

MISCELLANEOUS COUNTIES
Rigs

Coffey County—
30-20-15 Andrews, Sunbeam Pet. 1.
Harvey County—
4-23-2e Hawk, Mason & Ralston 3.
Lane County—
11-18-17 Dickinson, Richards Ref. 1.
Lincoln County—
29-12-8w Rohwer, Eisenhour et al 1
McPherson County—
3-17-2w Anderson, Wynn et al 1.
3-18-2w Anderson, Young et al 1.
1-19-5w Erickson, Transcontinental Oil 1.
8-21-4e Waner, White Eagle O. & R. 1.
Morris County—
32-14-7e Barber, Kline et al 1.
Ness County—
35-18-21 Ryarsee, Bell & Sarton 1.
Pottawatomie County—
17- 9-12 Stewart, Crawford et al 1.
31- 9-12 Greschaber, Crawford et al 1.
Sedgwick County—
34-26-1e Jadin, Wichita O. & G. 1.
26-28-1w Whitten, Jasper & Beschka 1.
Wells Drilling and Shut Down
(Shut Down Wells Indicated by *)
Barber County—
33-30-14 Hargiss, B. B. Brown 1.*
Barton County—
27-18-12 Sooy, Cheyenne O. & G. 1.*
31-18-12 Taul, Haynes & Taul 1.*
22-18-13 Everleigh, Mountain States O. & G. 1.
17-19-11 Smith, Huffine et al 1.
Chase County—
21-19-6e Elliston, Kingwood Oil 1.*
19-19-8e Holsinger, Alters et al 1.*
19-21-5e Griffith, Security O. & G. 1.*
1-22-8e Irwin, Phillips Pet. 1.
Clark County—
20-32-21 Morrison, Watchorn O. & G. 1.
Cloud County—
6- 6-4w Murdock, Livingston et al 1.*
Coffey County—
36-21-14 Davidson, Cross et al 1.*
9-21-16 Miller, Kelly Brothers 1.*
13-22-13 Beyer, Braden Brothers, 1.*
14-23-13 Elliott, Manhattan Oil 11.*
Decatur County—
26- 3-26 Reager, Marland Oil 1.
Ellis County—
16-11-17 Bemis, Sparks et al 1.*
14-12-16 Smith, James Davis et al 1.
18-13-17 Polifke, J. Alan Harvey 1.*
33-15-20 Murphy, Faler et al 1.*
Ellsworth County—
24-14-7w Walker, United Pet. 1.*
6-14-9w Kasper, John Herron et al 1.*
Finney County—
36-21-30 Wann, Garden City O. & G. 1.
Franklin County—
17-16-18 Owens, Smith-Trice & Fisher 1.
Geary County—
9-12-6e Wright, Liberty Texas Oil 1.*
30-13-6e Foster, Liberty Texas Oil 1.*
Graham County—
23- 8-24 Taxton, Keys Brothers & Marine 1.
Hamilton County—
5-26-14w Ransom, Wood Oil 1.*
Harvey County—
27-22-2e Symons, S. A. Hunter 1.*
5-23-1e Goertz, Union Oil 1.*
4-23-2e Masters, Derby Oil 1.*
Hawk, Derby Oil 1.*
11-24-2e Thompson, Shaffer O & R. 1.*
Hodgeman County—
19-21-22 Frizzell, Spencer & Marconette 1.*
Jefferson County—
13- 9-19 Edwards, Northern Counties Oil 1.*
Kingman County—
34-27-7w Graber, D. P. Fleeger et al 1.*
Labette County—
14-31-17 Sparks, Arkansas Fuel Oil 1.*
26-33-17 Wilks, Arkansas River Gas 1.*
1-32-20 Turman, Noble Oil 1.*
33-32-20 Burns, C. W. Willy et al 1.*
1-33-17e Hornback, T. R. Cowell et al 1.
5-35-20 Lips, Wantland et al 1.*
Lincoln County—
19-11-6w Stone, Scott & Collins 1.*
22-11-6w Lewis, Pope & Powell 1.*
16-11-7w Crawford, Amerada Pet. 1.*
31-12-10 Lambert, Berry & Rosenthal 1.*
36-13-7w Paul, United Pet. 1.*
19-13-9w Jellison, Equity Oil 1.*
McPherson County—
29-18-2w Anderson, Waugh & Casey 1.*
21-20-2w Linn, Krown & Krown 1.*
26-21-5w Thiesson, Ramona Oil 1.*
Marion County—
32-21-4e Equity Security, Morgan et al 1.*
8-22-4e Spier, John Markham 5.*
Mitchell County—
23- 6-9w Elder, Wilcox Oil & Gas Co. 1.
10- 9-8w Beeler, Alcorn Oil 1.*
Morris County—
21-17-7e Welcher, Bowman & Jones 1.*
Nemaha County—
19- 3-11 Meyers, Nemaha O. & G. 1.*
Osborne County—
9-10-14 Bealby, Knight et al 1.*
Osage County—
3-15-15 Unknown, Baker et al 1.*
27-15-16 Baily, West et al 1.*
8-17-17 Neil Est., Muil-Vitt Dev. 1.*
Phillips County—
25- 4-16 Hull, Frost Drilling Co. 1.*
13- 5-18 McKinley, Good & Craise 1.*
Pottawatomie County—
11-10-12 St. Marys, Crawford et al 1.*
Reno County—
3-22-6w Sallee, Hipple & Child et al 1.*
13-23-8w Short, Reno County O. & G. 1.*
28-25-6w O'Halloran, George Gano, trustee 1.
5-26-4w Williams, M. M. Travis et al 1.
Rice County—
10-18-6w Walker, Jasper & Beschka 1.*
1-19-7w Deeds, Pryor & Lockhart 1.*
21-20-6w Barnes, Stamey et al 1.*
26-20-6w Johnson, Midland Oil 1.*
15-21-10 Taylor, H. T. Proctor et al 1.*
Riley County—
14- 9-4e Woodbury, Empire G. & F. 1.
26-10-6e Marks, Pawnee O. & G. 1.*
20-10-7e Thierer, Douglass & Youker 1.*
Rooks County—
30- 6-17 Law, Marland Oil 1.
7-8-20w Saindon, Keys Pet. 1*.

Rush County—
10-18-16 Moore, Morgan & Downing 1.*
22-18-19 Kirby, Raber et al 1.*
Saline County—
29-14-2w Davis, L. S. Johnson 1.*
26-15-2w Shelton, Brown & Woodard 1.*
15-15-4w Holmquist, Thralls et al 1.*
Sedgwick County—
6-25-1e Poff, Boyle, Preston & Tack 1*.
14-28-2e Landon, E. R. Merriam 1.
14-29-2w McMillen, Curtis & Frost 1.*
2-29-2e Fleming, Higgins 1.
29-29-2e Junsaker, Hartman, Skaer & Johnson 1.
Seward County—
34-34-34w Wood, G. T. C. Dev. & Defender Petroleum 1.*
20-33-33w Seeley, Seward Oil & Gas 1.*
Stafford County—
29-21-11 Sifers, King & Langston 1.*
Trego County—
9-11-22 Kyser, A. D. Morton 1.*
16-11-24 Davis, Keys Brothers & Marine 1.
5-11-25 Walsh, Keys Petroleum 1*, 2*.
Wabaunsee County—
15-13-12 Hendrickson, Williams et al 1.*
Washington County—
9- 5-5e Wickham, Barnes O. & G. 1.*
Rigs, 14; wells drilling and shut down, 97; total, 111.

EAST CENTRAL TEXAS

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
(Wortham) Limestone and Freestone Counties	130	279,542	19	1	18	192	210
Navarro County	...	.....	..	.	3	19	22
Misc.	...	.....	..	.	6	40	46
Ttl. Jan. 130		279,542	19	1	27	251	278
Ttl. Dec. 30		76,805	10	1	126	207	333
Difference 100		202,737	9	0	99	44	55

WELLS COMPLETED
LIMESTONE-FREESTONE COUNTIES
WORTHAM FIELD

Crouch, Humble Oil & Ref. 1-A.....6500
Bounds, Pure Oil Co. 1 5000
Bounds, Pure Oil Co. 2 5000
R. Simmons, Sims Oil & Marland Oil 1..2200
Colome, Sims Oil 1 3000
Edwards, E. L. Smith et al 1 3000
Manning, Carter & Lytle 1 8000
Lindley, Stroube & Stroube 1 .....gas
Simmons, Moss et al 1 3000
R. R. right-of-way, Rio Bravo 1.....3200
Right-of-way, Rio Bravo 2 3000
Right-of-way, Rio Bravo 4 4500
Dodd, Humble Oil & Ref. 1 5500
Dodd, Humble Oil & Ref. 2 1200
Chancellor, Kirby Petroleum 1 1500
Morrow, Oxford Oil 1 8000
Simmons, Atlantic and Penn 1 2500
Simmons, Boyd Oil 2 2500
Simmons, Boyd Oil 7 2000
Crouch, J. K. Hughes 1 1200
Crouch, J. K. Hughes 2 3200
Crouch, Humble Oil & Ref. 5-A 3500
Simmons, Murchison et al 1 4500
Crouch, Pure Oil 1 1940
Bounds, Pure Oil 3 1200
Simmons, Simms Oil and Marland Oil 1-A 3800
Simmons, Simms Oil and Marland Oil 2-A 4500
Edwards, Atlantic Oil Prod. 1 5300
Hinchcliffe, Atlantic Oil Prod. 1 1200
Cashion, Cranfill & Reynolds 1 5000
Jackson, Farish, Watts & Collins 1.....1500
Jackson, Farish, Watts & Collins 2 3000
Simmons, Gulf Prod. Co. 2 3500
Poindexter, Humble Oil & Ref. 1 .....abd
T. B. Poindexter, Humble Oil & Ref. 1.....8500
T. B. Poindexter, Humble Oil & Ref. 1.5000
Crouch, Humble Oil & Ref. 4.....6500
Crouch, J. K. Hughes 2-A .....dry
Crouch, J. K. Hughes 6 4500
Crouch, J. K. Hughes 7 3500
Wright, Kirby Petroleum 2 3200
Manning, Simms Oil 3 1500
Manning, Simms O il 6 200
Calome, Simms Oil and Marland Oil 3.1100
Boyd, Magnolia Petroleum 12 900
Boyd, Magnolia Petroleum 10 1000
Wilson, Boyd Oil 1-A 2000
Simmons, Sun Oil 2 4000
Phillips-Young, Oxford Oil 1 200
Watson, Kirby Petroleum 1 600
Boyd, Magnolia Petroleum 7 500
Patterson, Walsh et al 1 4000
Boyd, Magnolia Petroleum 11 1000
Dodd, Humble Oil & Ref. 3 1000
Manning, Simms Oil 1 400
Lindley, Humble Oil & Ref. 3 700
Jackson, Farish, Watts & Collins 3....1800
Ferguson, Godley Oil 1 2000
Wilson, Boyd Oil Co. 3-A 500
Teale, Ray & Massie 1 100
Simmons, Simms Oil-Marland Oil 9 250
Smith, Boyd Oil Co. 1-B 750
Stubbs, Humble Oil & Ref. 1 2000
Smith, Boyd Oil 2-A 1000
Wright, Farish, Watts & Collins 1 2800
Lindley, Gulf Prod. 4 .....dry
Stubbs, Gulf Prod. 4 .....dry
Crouch, Pure Oil 2 .....dry
Crouch, Pure Oil 3 .....dry
Wright, Southern Exploration Co. 2....dry
Boyd, Magnolia Petroleum 2 900
Boyd, Magnolia Petroleum 3 850
Barry, Ray & Massie 1 240
Calome, A., Simms Oil Co. 1 200
H. B. Stubbs, Humble Oil & Ref. 1....1000
Lindley, A., Humble Oil & Ref. 3 700
Simmons, Marland and Simms 8 500
Simmons, Simms & Marland 2-A 600
Rogers, Simms & Marland 1 600
Jackson, Farish, Watts & Collins 4.. 50
McCorkle, Farish, Watts & Collins 2..1200
Moore, Moss & Keeling 1 1200
Watson, The Texas Co. 3 900
Boyd, Magnolia Petroleum 4 80
Boyd, Magnolia Petroleum 6 80
Boyd, Magnolia Petroleum 15 1000
R. R. right-of-way, Rio Bravo Oil 7..700
Crouch, J. K. Hughes 3 1000
Dodd, Humble Oil & Ref. 8 2000
Manning, Humble Oil & Ref. 1 60
Manning, Humble Oil & Ref. 3 75
R. Simmons, Boyd Oil 8 2000
Simmons, Mrs. J. K. Hughes 2 3500
Simmons, Mrs. J. K. Hughes 4.....2100
Goodnite, Quaker Oil 1 .....dry
R. Simmons, Simms-Marland 7-A.....1000
R. Simmons, Simms-Marland 1-B.....4500
Hinchcliffe, Atlantic Oil Prod. 2 4500
Benner, Barclay & Meadows 1 5000
Wright, Barclay & Meadows 1 ..... abd
Edwards, Carter & Lytle 1 500
R. Simmons, Gulf Prod. 1 167
Chancellor, Kirby Pet. 3 ..... dry
Wallace, Mills Bennett 1 ..... dry
Jackson, Republic Prod. Co. 1 ..... dry
Calome, Simms Oil 4 4500
Calome, Simms-Marland 2-A 4800
Hackney, Simms-Marland 2 1500
Longbotham, Sewell et al 1 ..... abd
Young, Tarver et al 1 ..... abd
McCorkle, Tri Wy Oil 1 3500
W. E. Smith, Boyd Oil 1-A .....dry
Mrs. J. J. Manning, Godley Oil 1 9000
W. D. Wilson, Gulf Prod. 2 2700
Wilson, Gulf Prod. Co. 1 3500
N. B. Boyd, Magnolia Petroleum 9 2800
E. D. Crouch, J. K. Hughes Dev. Co. 4.1200
Simmons, Mrs. J. K. Hughes 1 5000
Calome, Simms Oil 3 3000
Crouch, J. K. Hughes Dev. 5 3500
Guerner, Republic Prod. Co. 1 1800
Crouch, Humble Oil & Ref. 4-A 5000
Simmons, Sun Oil Co. 4 1200
Lindley, Humble Oil & Ref. 3-B 2000
Quinby, Gulf Prod. 1 2400
Childs, Kirby Petroleum 1 ..... dry
Simmons, Owenwood Oil 1 ..... abd
Right-of-way, Rio Bravo Oil 14 ..... dry
Simmons, Marland-Simms 7 1000
Miscellaneous—
Speight, Gardner et al 1 ..... dry

Wells completed 130
Production 279,542
Dry 19
Gas 1
Gas production 500,000

LIMESTONE-FREESTONE COUNTIES
WORTHAM FIELD
Rigs

McClelland heirs, McDonald Brothers 1.
Bounds, The Texas Co. 4.
Jackson, Farish, Watts & Collins 5.
Dodd, Humble Oil & Ref. 10.
Crouch, J. K. Hughes 14, 15.
Hackney, Simms Oil and Marland Oil 6.
W. E. Smith, Humphreys-Boyd Oil 2-B.
W. D. Wilson, Humphreys-Boyd Oil 7.
Lindley, H., Gulf Prod. 7.
S. P. right-of-way, Rio Bravo Oil 9.
W. E. Smith, Wheelock & Collins 3.
W. E. Smith, Boyd Oil 2-B.
N. B. Boyd, Magnolia Petroleum 14.
Ferguson, Humphreys-Boyd Oil 5, 16, 12, 17.
Boyd, Cranfill & Reynolds 1.

Wells Drilling

Prewitt, Kechi Petroleum 1*.
Bounds, Patterson Lake Oil 1*.
Jones-Munsey, Ramsey Oil & Gas 1.
R. Simmons, Atlantic Oil Prod. 2.
Simmons, Mrs. J. K. Hughes 2, 5.
Crouch, Humble Oil & Ref. 1, 2.
Lindley, Humble Oil & Ref. 2-A.
R. Simmons, Humble Oil & Ref. 2, 4, 5.
R. Simmons, H. Moss et al 2.
R. Simmons, Murchison et al 2.
Bounds, Pure Oil 4, 5.
S. P. right-of-way, Rio Bravo Oil 3, 5, 7, 14.
Beal, E. L. Smith et al 2.
R. Simmons, Simms Oil and Marland Oil. 4-A, 5-A, 6-A, 9-A, 2-B, 3-B, 4-B.
Bounds, The Texas Co. 2, 3.
Watson, The Texas Co. 2.
Williams, Atlantic and Penn 1.
McCorkle, Atlantic Oil Prod. and Penn. 2, 3.
Edwards, Atlantic Oil Prod. 2.
Williams, Atlantic and Penn 2.
Mrs. B. Martin, Cranfill & Reynolds 1.
Mrs. B. Martin, Carter & Lytell 1.
Longbotham, Jack Clark et al 1.
Clk. 4, Div. 12, Hammond et al 1.
Hackney, L. P. Hammond 1, 2.
R. Simmons, Humble Oil & Ref. 1.
Poindexter, Humble Oil & Ref. 1, 3.
T. B. Poindexter, Humble Oil & Ref. 2, 3, 5, 7-A, 8-A.
E. D. Crouch, Humble Oil & Ref. 5-A, 6-A, 1-B.
E. D. Crouch, Humble Oil & Ref. 9-A, 10-A, 2-B.
E. D. Crouch, Humble Oil & Ref. 3-D.
Dodd, Humble Oil & Ref. 3, 4, 6, 7, 9.
T. E. Longbotham, Humble Oil & Ref. 1.
P. Stubbs, Humble Oil & Ref. 2-A.
E. D. Crouch, J. K. Hughes et al 8, 10, 11, 12, 13.
Easterling, Moss et al 1.
Allen, Oxford Oil 1.
B. Hurch, Oxford Oil 1.
Allmond, Republic Oil 2, 3, 4, 5.
Hackney, Simms-Marland 1, 3, 4, 5.
A. H. Edwards, E. L. Smith et al 1.
Keeling, E. L. Smith et al 1.
Simmons, Sun Oil Co. 2, 3, 5, 6.
Longbotham, Southern Exploration Co. 1, 2.
Wright, Southern Exploration 2.
Young, Tarver et al 2.
Chancellor, The Texas Co. 2, 5.
Wright, The Texas Co. 1.
McCorkle-Young, Tri Wy Oil 1.
Berry, Walsh et al 1.
Mrs. Manning, Humphreys Boyd Oil 3, 4.
W. E. Smith, Humphreys Boyd Oil 4-A, 2-B, 3-B, 6-B, 5-B, 7-B, 8-B, 9-B, 10-B.
W. D. Wilson, Humphreys-Boyd Oil 2-A, 3-A, 4-A, 6-A, 7-A, 3-B.
Colquitt, Godley Oil 1.
Mrs. Manning, Godley Oil 2.
N. H. Lindley, Gulf Prod. Co. 3, 4, 5, 6.
W. D. Wilson, Gulf Prod. Co. 3, 4, 5.
Ferguson, Humble Oil & Ref. 2.
N. H. Lindley, Humble Oil & Ref. 3-A, 4-A.
N. H. Lindley, Humble Oil & Ref. 5-A, 7-A, 8-A, 4-B.
R. Simmons, Humble Oil & Ref. 3.
Mrs. J. J. Manning, Humble Oil & Ref. 2, 4, 5.
Calloway, Northwestern Oil 1.
Seale, Ray & Massie 2.
S. P. right-of-way, Rio Bravo Oil 8.
Manning, Simms Oil 1, 4.
Seale, Skelly Oil 1.
W. E. Smith, Wheelock & Collins 1.
Limestone County—
F. Ferguson, Humphreys-Boyd Oil 11.
W. E. Smith, Humphreys-Boyd Oil Co., 2-B, 5-B, 6-B, 12-B, 13-B, 14-B.
N. B. Boyd, Magnolia Petroleum 14.
W. D. Wilson, Humphreys-Boyd Oil 1-B, 3, 4, 5, 6, 7, 8.
Ferguson, Humphreys-Boyd Oil 4, 5, 6, 7, 8, 9, 10, 12, 15, 18.
Mrs. T. P. Lindley, Humphreys-Boyd Oil 2.
Ferguson, Godley Oil 2.
Finch, Humble Oil & Ref. 2, 3.
N. B. Boyd, Magnolia Petroleum Co. 1, 2, 4, 13, 16, 17, 18.
Cook, Mexia Giant Oil 1.
Webster, The Pure Oil Co. 1.
Rigs, 18; wells drilling, 193; total, 210.

NAVARRO COUNTY
Howell, Simms Oil 1.
Boyd, Williams & Fyle 1.
Goffey, Garland Kent 1.
Wells Drilling and Shut Down
(Shut down wells indicated by *.)
Webb, Boyd Oil 9.
Allison, Simms Oil 6.
Gordon, Simms Oil 2*.
Swink, Sun Oil 1.
Kent, Pure Oil 9.
McCormack, Bankers Trust 1*.
Williamson, Andrews Petroleum 2.
Harvard, Bridwell & Gray 4*.
Quimby, Moore Brothers 1.
English, Pure Oil 5.
Morrow, J. K. Hughes Oil 4.
Roberts, Patrick et al 1*.
Pillin, Ashley Brothers 1.
Greer, Powell Petroleum 1.
Westbrook, Elliott & Nicholle 1.
Chapman, McMan Oil 8.
Barrow, Garland Kent 2.
Kent, Humble Oil & Refining 1.
Rigs, 3; wells drilling 19; total, 22.

MISCELLANEOUS
Rigs

Anderson County—
Turner, Hughes et al 1.
Cass County—
Speers, Bankers Trust Co. 1.
Caster, Gibbs Petroleum 1o.
Hopkins County—
Davis, Gulf Production Co. 1.
Hunt County—
Barnett, Tullal & Kelsey 1.
Van Zandt County—
Greer, Marland Oil Co. 1.
Wells Drilling and Shut Down
(Shut down wells indicated by *.)
Anderson County—
Parker, J. E. Williams et al 1*.
Brooks & Audit, Rosser et al 1*.
Morning Plant, Palestine Oil & Gas 1*.
Bowie County—
Parker, Dalby Springs Oil 1*.
Rochell, Delaney Oil Co. 1*.
LeForte, Mook Oil & Gas 2*.
Taylor, Tristate Oil 1*.
Cass County—
Evans, Caldwell et al 1*.
Cherokee County—
Clapp, Collington Drilling Co. 1.
Delta County—
Patrick, J. E. McNeill 1*.
Falls County—
DeGraffenreid, Myrin et al 1.
Penny, Edward Falsey 1*.
Preston, C. W. Harrison et al 1*.
Peacock, High Banks Oil 1*.
Henderson County—
Bounds, F. Haynes 1*.
Eade, Richardson Brothers 1*.
Hopkins County—
Enix, The Texas Co. 1*.
Brooks, Kelsey et al 1*.
Kaufman County—
Kirby, Germany et al 1*.
Barrow, Skinner & Lyles 1*.
Leon County—
Carrington, Mexia Marquest Oil 1*.
Milam County—
Smith, Sinclair Oil & Gas 1.
Letters, E. C. Nelson 1*.
Ashley, Beverly Oil 1*.
Buer, Beverly Oil 1.
Bremond, Mills Bennett 1*.
Hollison, Garland Fallis 1.
Raines County—
Dowell, McLaughlin & Lyles 1*.
Red River County—
Dinviddie, Brewer Rines 1*.
Simmons, Clarksville Texas Co. 1*.
Arnold, Isabell Givens 1, 1*.
Antone, Johnson Petroleum 1*.
Wortham, O'Bannon Brothers 1*.
Garland, Higgins Oil & Gas 1*.
Robertson County—
Wilkerson, J. C. Bland et al 1*.
Rigs, 6; wells drilling, 40; total, 46.

NORTH CENTRAL TEXAS

Summary of Wells Completed

District—	Comp.	Prod.	Dry	Gas
Wichita	18	482	6	0
Archer County	96	9,175	24	0
Young	17	560	14	0
Stephens	19	475	9	3
Eastland	9	280	1	2
Wildcats	34	7,100	14	1
Total January	193	18,072	68	6
Total December	223	30,518	84	4
Difference	30	12,446	16	2

Rigs and Wells Drilling

District—	Rigs	Drg.	Ttl.
Wichita	9	27	36
Archer	27	91	118
Young	7	29	36
Stephens	8	25	33
Eastland	1	17	18
Wildcats	28	100	128
Total January	80	289	369
Total December	58	299	357
Difference	22	10	12

WELLS COMPLETED
WICHITA COUNTY

Throckmorton, Cook et al 1..... 5
Watkins, Hawkins et al 1..... 85
Allen & Kemp, Kruger et al 9..... 30
Fee, Murray et al 1..... dry
K. & K., The Texas Co. 1..... dry
Burnett, Texhoma O. & R. Co. 2-B..... 75
Kemp, Leath-McCarty O. Co. 1..... dry
Doneghy, O'Neil et al 1..... dry
Allen & Kemp, Petroleum Prod. Co.... 100
Roller, Pace et al 1..... dry
Douglas, Drillers Dev. Co. 6..... 10
Burnett, Howell et al 2..... 12
Reilly, Magnolia Pet Co. 108..... 45
Reilly, Magnolia Pet. Co. 111..... 60
Staley-Beach, Magnolia Pet. Co. 41.... 10
Chilson, Stump Oil Co. 1..... dry
Burnett, Burnett Ranch Oil Co. 9.... 10
Burnett, Texhoma O. & R. Co. 13-B.... 40

Wells completed..... 18
Production..... 482
Dry..... 6

ARCHER COUNTY

Ferguson, A. B. C. Oil Co. 3..... 15
White, Carter and others 15-A..... 75
Coffman, Dorrington et al 1..... dry
White, Humphries et al 9..... 185
White, Humphries et al 12..... 9
Parrish, Magnolia Pet. Co. 11..... 10
White, Murchison et al 5..... 10
Wilson, Ramming et al 5..... 6
Edwards, Hayzor et al 1..... 6
Wilson, Riner et al 3-A..... dry
Wilson, Woodburn Oil Corp. 15-A..... dry
Echols, Clark et al 5..... 6
Cowan, Cline et al 1..... 10
Ragle, Consolidated Oil Co. 7-B..... 10
Turbeville, Duke et al 1..... 10
Rogers, Gwynn et al 4..... dry
Davis, Grisham et al 5..... 7
Stampfli, Harris et al 1..... 10
Martin, Harris et al 1..... 10
Wood, Humble O. & R. Co. 1..... dry
Norton, Lyles et al 1..... 10
Goldsmith, Meiat et al 2..... dry
Harmel, Murchison et al 2-B..... 10
Harmel, Murchison et al 2-C..... 10
Griffin, Murchison et al 6..... 7
Griffin, Murchison et al 7..... 7
Wood, Murchison et al 2..... 7
Wood, Murchison et al 3..... 10
Rogers, Petroleum Producers Co. 5..... 10
Rogers, Petroleum Producers Co. 6..... 10
Andrews, Ramming et al 1-B..... 10
Morrison, Scruggs et al 1..... dry
Campbell, Shamrock Oil Co. 4..... dry
White, Carter et al 3-A..... dry
White, Comet Pet. Co. 3..... 10
Oil Investment Co., Humble O. & R. Co. 1..... dry
White, Jetter et al 2..... 10
Oil Investment Co., Lincoln et al 2..... dry
Parrish, Magnolia Pet. Co. 9..... 10
Fee, Oil Investment Co. 3..... 6
Wilson, Phillips et al 4..... 10
White, Robertson et al 6..... 10
White, Robertson et al 15..... 10
White, Robertson et al 16..... 10
Parrish, Simms Oil Co. 4..... 10
K. & K., Staley et al 4..... 10
Davis, Consolidated Oil Co. 6-A..... dry
Davis, Consolidated Oil Co. 2-B..... dry
Bridwell, Cullum et al 5..... 6
Abercrombie, Greet et al 3..... 6
Rogers, Gwynn et al 3..... 10
Wood, Gwynn et al 2..... 10
Harmel, Murchison et al 4-C..... 10
Harmel, Mutual Oil Co. 2..... 10
Harmel, Mutual Oil Co. 3..... 10
Hausler, Ray et al 6..... 10
Hausler, Ray et al 7..... 10
Hausler, Ray et al 8..... 10
Kunkel, Roxana Pet. Co. 1..... 10
Neal, Swastika Oil & Co. 2..... 10
Hausler, Texhoma O. & R. Co. 9..... 10
Hausler, Texhoma O. & R. Co. 10..... 10
Wilson, Verschoyie et al 8-B..... 10
Logan, Carey Drilling Co. 2..... 10
Bearden, Consolidated Oil Co. 6..... 10
Ragle, Consolidated Oil Co. 4-C..... 10
Rogers, Fisher et al 1..... 10
Hughes, Camp O. & G. Co. 1..... dry
Davis, Consolidated Oil Co. 7-A..... 10
Ragle, Consolidated Oil Co. 8-B..... 10
Ragle, Humble O. & R. Co. 3..... 10
Bridwell, Petroleum Prod. Co. 3..... 10
Goldsmith, Shamrock Oil Co. 17..... 10
Jeske, The Texas Co., 3..... 10
Wilson, Gohlke et al 1..... dry
Wilson, Graham et al 6-B..... 10
Nichols, Face et al 1..... dry
Wilson, Texhoma et al 1..... dry
Ward, Atlantic Oil Co. 1..... dry
Lane, Hobbs et al 1..... 10
Griffin, Murchison et al 8..... 10
Griffin, Murchison et al 9..... 10
Harmel, Murchison et al 4-B..... 10
Harmel, Murchison et al 5..... 10
Harmel, Murchison et al 5-C..... 10
Wood, Murchison et al 4..... 6
Wood, Murchison et al 6..... dry
Bridwell, Petroleum Prod. Co. 4..... 10
Hausler, Petroleum Prod. Co. 1..... 10
Hausler, Ray et al 9..... 10
Hausler, Ray et al 12..... 10
Hayter, Shaw et al 1..... 10
Kelly, Staley et al 1..... dry
Farmer, Sun Oil Co. 6..... dry
Hausler, Texhoma O. & R. Co. 11..... dry
Campbell, Young et al 1..... dry

Wells completed..... 11
Production..... 1175
Dry..... 24

YOUNG COUNTY

Bearden, Consolidated Oil Co. 1..... dry
Colley, Knight et al 1..... dry
Jeffrey, Knight et al 1..... dry
Pringle, Knight et al 1..... dry
Campbell, Murchison et al 1..... dry
Campbell, Burton et al 1..... dry
Bearden, Consolidated Oil Co. 1..... dry
Andrews, Harris et al 1..... dry
Logan, Knight et al 1..... dry
Keathley, Union Oil Co. 1..... dry
Heatherly, Heatherly et al 1..... dry
West, Jeffers et al 1..... dry
Jeffrey, Jones et al 1..... dry
Gambell, Murchison et al 1..... dry
Davis, Camp O. & G. Co. 1..... dry
Carter, McGuire et al 1..... dry
Carpenter, Sims Oil Co. 100..... 10

Wells completed..... 17
Production..... 600
Dry..... 11

STEPHENS COUNTY

Lee, Mid-Kansas O. & G. Co. 2..... 10
McClesky, Fouts et al 1..... dry
Taylor, Magnolia Pet. Co. 1..... dry
Hart, Pender Prod. Co. 1..... dry
Jones, Pennok Oil Co. 1-B..... dry
Bruce, Price et al 4..... dry
Adams, Trippiehorn Pet. Co. 1..... dry
Williams, Mid-Kansas O. & G. Co. 2 Acct. 2..... dry
Crudington, Pierce et al 1..... dry
Ackers, Snowden & McSweeney 3, Acct. 1..... 10
Martin, Texas Consolidated Oil Co. 2.. dry
Jennings, Carter et al 1..... dry
T. & P. Ry., Carter et al 1..... dry
Grimes, Kleinfelder et al 1..... dry
Curry, The Texas Co. 10..... dry
Simmons, Cobb et al 1..... dry
Winston, Texas Pacific C. & O. Co. 2-B 10
Keel, Pender Prod. Co. 3, 2..... dry
McClesky, Ice et al 1..... dry

Wells completed..... 13
Production..... 175
Dry..... 1
Gas..... 1
Gas production..... 27,000,000

Eastland County

Barnes, Magnolia Pet. Co. 7 10
Rogers, Magnolia Pet. Co. 4 40
Scott, Parsons et al 1 ..... gas
Pettit, Pittman et al 1 25
Wheeler, Root et al 1 ..... dry
Ammermon, Root et al 1 75
Brashear, Dixie Oil Co. 1 30
Quiett, States Oil Co. 5 100
Jordan, Eastland Oil Co. ..... gas

Wells completed 9
Production 280
Dry 1
Gas 2
Gas production 18,000,000

WILDCAT COMPLETIONS

Wilbarger County—
Dill, Petroleum Co. 2 70
Stephens, Bridwell et al 5 210
Waggoner, Kolp et al 1 165
Bond, Ray et al 2 125
Sumner, Magnolia Pet. Co. 46 50
Bond, Ray et al 4 575
Stephens, South Vernon Oil Co. 4 150

Reagan County—
University, Texon Oil & Land Co. 2, Group 1 3035
University, Texon Oil & Land Co. 3, Group 1 2175

Baylor County—
Sykora, Nelson et al 1 ..... dry
Fancher, Moore et al 1 ..... dry

Clay County—
Culver, Evans et al 1 ..... dry
Camp, Cumley et al 1 ..... dry
Scott & Ramsdell, Sullivan et al 3 ..... dry

Throckmorton County—
Conger, Darkin et al 1 10
McCarson, Clark et al 1 ..... dry

Callahan County—
Bryson, Pope et al 4 ..... dry
Snyder, Kellogg Drilling Co. 1 ..... dry
Isenhower, Seaboard O. & G. Co. 2-A .. 25

Palo Pinto County—
Chenault, Hall et al 1 ..... dry
Stuart, Moore et al 1 ..... dry
Simmons, Pander Production Co. 2 25

Mitchell County—
Keynard, Morrison et al 1 100
Abrams, California Co. 7 30
Coleman, Humphreys et al 1 ..... dry
Clark, California Co. 1 200
Miller, California Co. 5 60

Brown County—
Gunn, Stone et al 2 5
Williams, Moore et al 1 ..... gas
Newton, Gilliman et al 6 30
Newton, Mahlstedt Mook Oil Co. 2 60
Elsbury, Canyon O. & G. Co. 1 ..... dry
Newton, Davis et al 2 ..... dry
Chambers, Slick et al 1 ..... dry

Wells completed 34
Dry 14
Gas 1
Production 7100

WICHITA COUNTY

Rigs

Reilly, Magnolia Pet. Co. 110.
Overby, Allen et al 11.
Burnett, Atlantic Oil Co. 1.
Waggoner, Eureka Prod. Co. 11.
Watkins, Hawins et al 3.
Waggoner, Magnolia Pet. Co. 10-A.
Burnett, Moore et al 2.
Ancell, Salmon et al 1.
Burnett, Section 3 Oil Co. 5.

Wells Drilling

Sefley, Baldwin et al 1.
Reilly, Magnolia Pet. Co. 109.
Jackson, Texhoma O. & R. Co. 1.
K. & K., Bailey et al 1.
Pierce, Empire G. & F. Co. 6.
McCarty, Hamon et al 1-A.
Watkins, Hawkins et al 2.
Allen & Kemp, Kruger et al 10.
Allen & Kemp, Maer et al 1.
Abernathy, Magnolia Pet. Co. 9.
Douglas, Magnolia Pet. Co. 11.
Honaker, Magnolia Pet. Co. 66.
Maer, Magnolia Pet. Co. 10.
McMan-Waggoner, Magnolia Pet. Co. 8.
Rio Bravo, Magnolia Pet. Co. 40, 41.
Peer, Waggoner, Magnolia Pet. Co. 4-F.
Waggoner, Magnolia Pet. Co. 8-A, 9-A, 4-B.
Watkins, Magnolia Pet. Co. 2.
Woodward, O'Neil et al 1.
Allen & Kemp, O'Donohoe et al 4.
Burnett, Perkins et al 12.
Burnett, Section 2 Oil Co. 6.
Burnett, Texhoma O. & R. Co. 7.
McFall, Wichtex Oil Co. 1.
Rigs, 9; wells drilling, 27; total, 36.

ARCHER COUNTY

Rigs

Dale, Beaudoin et al 1.
Wilson, McCarty Oil Co. 5-B.
Lauster, Magnolia Pet. Co. 1.
Farmer, Moran et al 1.
Ward, Atlantic Oil Co. 2.
Cormosek, Clark et al 1.
Rogers, Clark et al 1.
Echols, Clark et al 4.
Falls County School Land, Gary Oil Co. 1.
Hayter, Christie Brothers 1.
Rogers, Gwynn et al 2-B.
Staffi, Harris et al 2.
Hayter, Humble O. & R. Co. 1.
Stamfil, Humble O. & R. Co. 1.
Monahan, Maer et al 2.
Rogers, Magnolia Pet. Co. 1.
Stampfil, Magnolia Pet. 1.
Griffin, Murchison et al 12, 13, 14.
Harmel, Murchison et al 7-B.
Kunkel, Sun Oil Co. 1.
Mineral Tee, The Texas Co. 2.
Jeske, Texhoma O. & R. Co. 2.
Greenway, Willis et al 1.
Rogers, United Central Oil Co. 1, 2.

Wells Drilling

Chilson, Wolfe et al 1.
Dowlen, Archer Oil Co. 1.
White, Carter et al 14-E.
White, Carter et al 17-E.
Andrews, Electra Gulf Oil Co. 1.
Parrish, Franklin et al 2-B.
Meldrom, Haskell et al 1.
Wilson, Hobbs et al 5.
White, Humphreys et al 15.
Parrish, Magnolia Pet. Co. 10.
Wilson, Mid-Kansas O. & G. Co. 1.
Andrews, Norton et al 1.
Fee, Oil Investment Co. 4.
Wilson, Phillips et al 5, 6.
Wilson, Prairie O. & G. Co. 30-D.
Wilson, Riner et al 4-A.
White, Robertson et al 7- 1-B.
Parrish, Sims Oil Co. 5.
Wilson, Underwood Drilling Co. 1.
Wilson, Verschoyle et al 9-B.
Blewett, Atlantic Oil Co. 1.
Kunkel, Burns et al 1.
Lane, Hobbs et al 2.
Justice, McNamara Bros. 1.
Blewett, Atlantic Oil Co. 1.
Farmer, Sun Oil Co. 7.
Campbell, Christie Bros. 1.
Cowan, Cline et al 2.
Davis, Consolidated Oil Co. 3-A, 1-C.
Garvey, Crosslin et al 1.
Rogers, Fisher et al 2.
Andrews, Foster & Co. 1.
Bearden, Goldsmith et al 1.
Davis, Grisham et al 6, 7.
Rogers, Gwynn et al 1, 5.
Wood, Gwynn et al 3.
Brown, Harris et al 1.
Andrews, Howland et al 1.
Wood, Humble O. & R. Co. 2, 3.
Andrews, Jeffers et al 2.
Young, Litchfield et al 1.
Graham, Maer et al 1.
Monahan, Maer et al 1.
Morrison, Midway Dev. Co. 1.
Harmel, Murchison et al 6-B, 6-C, 1, 5.
Brazina, Muse et al 1.
Harmel, Mutual O. Co. 4, 5.
Prideaux, Nicholson et al 1.
Wilhelm, Norton et al 1.
Bridwell, Pet. Prod. Co. 5.
Hausler, Pet. Prod. Co. 3, 4, 5, 6.
Hausler, Ray et al 10, 11.
Kunkel, Roxana Pet. Co. 2, 3, 4, 5.
Goldsmith, Shamrock Oil Co. 19.
Richardson, Shamrock Oil Co. 5-C.
Hausler, Shaw et al 2.
Kinder, Southern Exploration Co. 1.
Green, Sun Oil Co. 4, 5.
Neal, Swastika Oil Co. 3.
Mineral Fee, The Texas Co. 1.
Phillips, Texhoma O. & R. Co. 1.
Kunkel, White Brothers 1.
Griffin, Wollett et al 3.
Rigs, 27; wells drilling, 91; total, 118.

YOUNG COUNTY

Rigs

Gose, Andrade et al 1.
Hankin, Burton et al 1.
Campbell, Camp Oil & Gas Co. 1-A.
Bullock, Kentucky Oil Co. 1.
Boone, Krog et al 1.
Gambrell, Murchison et al 3.
Carpenter, Simms Oil Co. 3.

Wells Drilling

Graves, Anderson et al 1.
Tucker, Burns et al 1.
Eicheiberger, Burton et al 1.
Craig, Dunn et al 1.
Johnson, Dunn et al 1.
Hall, Grisham et al 1.
Gambrell, Gwynn et al 1.
Wilson, Harvey et al 1.
Campbell, Humble O. & R. Co. 2.
Daws, Johnson et al 1.
Brooks, Knight et al 1.
Farmer, Maer et al 1.
Ickert, Mooers et al 1.
Schiegel, Murchison et al 1.
Kemp, Olney Prod. Co. 1.
Bullock, O'Neall et al 1.
Bernhardt, Pace Drilling Co. 2.
Leberman, Parker et al 1.
Dietrich, Pois et al 1.
Clark, Reed et al 1.
Foster, Reed et al 1.
Thomas, Staley et al 1.
Durham, Stone et al 1.
Hawkins, Suggett et al 1.
Gambrell, The Texas Co. 1.
Gambrell, Texhoma O. & R. Co. 1.
Belknap, Whitehead et al 1.
Stewart, White et al 1.
Campbell, Wilson et al 1.
Rigs, 7; wells drilling, 29; total, 36.

STEPHENS COUNTY

Rigs

Walker & Caldwell, Illinda Oil Co. 4-A.
Lowe, Mid-Kansas O. & G. Co. 3.
First National Bank, Walker et al 3.
Brown, Welsh et al 2.
Polon, Carter et al 1.
Walker Magnolia Pet. Co. 5.
Sorgee, Sindorf Brothers 3.
Gardenshire, Texas Pacific Coal & Oil Co. 2, Acct. 1.

Wells Drilling

Cobb, Critten et al 8.
Lane, Interstate Consolidated Oil Co. 1.
Hill, Mid-Kansas Oil & Gas Co. 15, 3 Acct. 2.
Lowe, Mid-Kansas O. & G. Co. 5, Acct. 2.
Tullos, Mid-Kansas O. & G. Co. 11.
Atkins, Prairie O. & G. Co. 15.
Knox, Republic Prod. Co. 2.
Higginbotham, Snowden & McSweeney 5.
Bradford, Adamson et al 2.
Walker, Buckeye Dev. Co. 8.
Post, Critten et al 1.
Hart, Hart Oil Corp. 6.
Gandy, Hughes et al 4.
Flournoy, Knox et al 1.
Ward, Landreth Prod. Co. 1.
Brown, Lewis Oil Co. 1.
Brown, Magnolia Pet. Co. 7.
J. W. Brown, Magnolia Pet. Co. 8.
McCauley, Magnolia Pet. Co. 5.
Watson, Schimmel et al 1.
Curry, Scott et al 1.
Jackson, Simms Oil Co. 6-A.
Binney, Texas Pacific C. & O. 44.
Hand, Texas Pacific C. & O. Co. 2, Acct. 2.
Rigs, 8; wells drilling, 25; total, 33.

EASTLAND COUNTY

Rigs

Bucy, Kimmell et al 1.

Wells Drilling

Norton, Brothers Oil Co. 1.
Elliott, Dorothy Oil Co. 1.
Eby, Miller et al 6.
Goodwin, Gallagher et al 1.
Gulf-Carruth, Magnolia Pet. Co. 2.
Harris, Magnolia Pet. Co. 7.
Bond, Reclamation Oil Co. 6.
Davenport, States Oil Co. 3.
Harrell, States Oil Co. 14.
Hamilton, Westheimer et al 8.
Stanton, Burkett et al 1.
Hazel, Eastland Oil Co. 1.
Lamb, Kimmell et al 1.
White, Knox-Lewis Oil Co. 1.
Storms, McMeans et al 1.
Hazel, Root et al 1.
Dulin, Weaver Oil Corp. 1.
Rigs, 1; wells drilling, 17; total, 18.

WILDCATS

Rigs

Hutchinson County—
Weatherly, Middleton et al 1.

Wells Drilling

Johnson, Branum et al 1.
Smith, Dixon Creek Oil Co. 1.
Shaw, Prairie Oil & Gas Co. 1.

Wells Drilling

Potter County—
Warrick, Amarillo Oil Co. 1.
Bivins, Amarillo Oil Co. 3-A.

Wells Drilling

Carson County—
Burnett, American Ref. Co. 2, 3.
Burnett, Gates Oil Co. 1.
Burnett, Marland Oil Co. 1.
Burnett, Skelly Oil Co. 2.

Wells Drilling

Gray County—
Bradford, Anderson et al 1.
Combs & Worley, Clark et al 1.
Henry, Dillard et al 1.
Morse, Holmes et al 2.

Rigs

Wilbarger County—
Lundy, Allday et al 1.
Waggoner, American Ref. Co. 1.
McCrary, Bridwell et al 1.
Castlebury, Humble O. & R. Co. 3, 5.
Richardson, McCamey et al 2.
Stephens, McCamey et al 2, 3, 4.
Castlebury, Priddy et al 2.
Waggoner, Wells et al 3.
Streit, Wood et al 1.

Wells Drilling

Wilbarger County—
Parker, Atlantic Oil Co. 1.
Stephens, Barkley et al 1.
Dill, Bridwell et al 3, 4.
Stephens, Bridwell et al 6.
Waggoner, Bridwell et al 1.
Waggoner, Burton et al 1.
Kester, Hamilton et al 1.
Castlebury, Humble O. & R. Co. 2, 4.
Waggoner, Kolp et al 2.
Waggoner, Levy et al 1.
Wheeler, Levy et al 1.
Fluhman, Lippard Oil Co. 1.
Youngblood, Little Oil Co. 1.
Fee, Magnolia Pet. Co. 66.
Zipperle, Mutual Oil Co. 1.
Bowers, Oklahoma Texas Prod. Ref. Co. 1.
Dill, Pet. Prod. Co. 8.
Castlebury, Priddy et al 1.
Waggoner, Ruff et al 1.
Murphy, Shipley et al 1.
Streit, Skinner et al 1.
Stephens, South Vernon Oil Co. 6, 7, 8, 9, 10, 11.
Stephens, Staley et al 1.
Waggoner, Staley et al 1.
Castlebury, The Texas Co. 1.
Waggoner, The Texas Co. 297.
Sheldon, Tippit et al 1.
Boyer, Wood et al 1.

Wells Drilling

Baylor County—
Fancher, Moore et al 2.
Shawver, Lehman et al 1.
Wallace, Richardson Brothers 1.
Martin, Skinner et al 1.
Wallace, McGregor et al 1.
Portwood, Texhoma O. & R. Co. 1.

Wells Drilling

Clay Cunty—
Scaling, Atlantic Oil Co. 1.
Holloway, Bennett Mills 1.
Martin, Lone Star Gas Co. 21.
Goetze, Shappell Oil Co. 1.
Boddy, Shelton Oil Co. 3.
Stine, Cumley et al 2.

Wells Drilling

Montgomery County—
Hinds, Mitchell et al 1.
Salmon, Owenwood Oil Corp. 1.
Howard, Pet. Prod. Co. 1.
Gist, The Texas Co. 3-A.
Salmon, The Texas Co. 1.

Wells Drilling

Throckmorton County—
Odell, Hamilton et al 1.
Davis, McNeil et al 1.
Smythe, The Texas Co. 1.

Rigs

Shackelford County—
Poindexter, Phillips Pet. Co. 13, 15.
Brooks, Eastland Oil Co. 2.

Wells Drilling

Poindexter, Cerf et al 1.
Elliott, Hogan et al 1.
Cerf, Humble O. & R. Co. 1.

Wells Drilling

Palo Pinto County—
Strawn Coal Co., Burton et al 3.
Smith, Hart et al 1.
Caudill, Phillips et al 1.
Williams, Wickins et al 1.

Rigs

Callahan County—
Cathey, Dutton et al 7.

Wells Drilling

Cathey, O'Donnel let al 1.
George T. Prewitt et al 1.
W. W. Crane, Prewitt et al 1.

Rigs

Mitchell County—
Keynard, Daniel et al 1.
Morrison, California Co. 12.

Wells Drilling

Gist, Eddleman et al 1.
Brown, Harris et al 2.
Miller, Sloan et al 3.

Rigs

Coke County—
Mimms, West Va. O. & Marketing Assn. 1.

Wells Drilling

Coleman County—
Overall, Roth et al 9.

Wells Drilling

Brown County—
Prater, Calvert Brothers 1.
Prather, New Era Oil Syndicate 3.

Rigs

Comanche County—
Goss, Mon-Tex Oil Corp. 1.

Wells Drilling

Utterbock, Trojan Oil Co. 1.

Rigs

Reagan County—
University, Big Lake Oil Co. 16, 17, 18.
University, Pilot Oil Corp. 1.
University, Texon Oil & Land, 5 Group 1.

Wells Drilling

University, Big Lake Oil Co. 15.
University, Brandon et al 1.
University, California Co. 1.
University, Crockett Drilling Synd. 1.
University, Hughes Dev. Co. 1.
University, Grayson et al 1.
Sawyer, Simms Oil Co. 1.
University, Texon Oil & Land Co. 1 Group 2, 4 Group 1.
University, Transcontinental Oil Co. 1.
Ingham, Wrightsman et al 1.

Wells Drilling

Upton County—
University, Virginia Texas Pet. Co. 1.
University, Willis et al 1.

Rigs

Pecos County—
Townsite, Quinby et al 1.

Wells Drilling

Perry, Plymouth Oil Co. 1.
Rigs, 28; wells drilling, 100; total, 128.

N. LOUISIANA-ARKANSAS

Summary of Field Operations

Dists.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union Co.	34	1,490	15	1	17	41	58
Ouachita Co.	42	4,337	3	0	17	59	76
Stephens	0	0	0	0	0	1	1
Nevada	2	350	0	0	6	6	12
Bellevue	0	0	0	0	0	1	1
Caddo	4	110	0	0	5	20	25
Cotton Valley	22	2,575	3	7	19	30	49
La. wildcats	19	0	6	13	8	46	54
Ark. wildcats	3	0	3	0	4	33	37
Total Jan.	126	8,862	30	21	76	237	313
Total Dec.	114	6,557	26	18	85	210	295
Difference	12	2,305	6	3	9	27	18

UNION COUNTY, ARKANSAS

Wells Completed

1-16-17 La Grone, Arkansas Fuel Oil Co. 5 40
5-17-15 Thompson, East et al 1 ..... dry
1-16-17 Neely, Clark, H. E., 2 30
1-16-17 Freeman, Estes et al 3 ..... dry
8-16-16 Childs, Federal Petroleum Co. 1 dry
25-16-16 Burton, Freeman et al 1 ..... dry
6-16-16 Hodges, Gilliland, W. H., A-1.. 75
2-16-15 Alphin, Gulf Refining Co. 10... 10
6-16-16 Werner, L., Gulf Refining Co. 24 60
6-16-16 Werner, L., Gulf Refining Co. 27 45
5-16-15 Hinson, Houston Oil Co. 3 ..... gas
3-16-15 Williams, Howell et al 1 120
17-17-15 Ford, Johnson, J. D. 1 ..... dry
26-16-16 Murphy, Jones, E. W., 1 ..... dry
3-16-15 Graves, Lion Oil & Ref. Co. 6.. 500
13-16-17 Goodwin - Campbell, Magnolia Co. 2 70
2-16-17 Smith, Magnolia Petroleum Co. 1 30
15-17-16 Dumas, Marr et al 1 ..... dry
10-19-15 Roberts, Montgomery et al 1.. dry
29-17-14 Smith, Myerscough et al 3 ... 50
1-18-16 Frazier, Natural Gas & Petroleum Co. 3 ..... dry
10-16-15 Pate, Ohio Oil Co. 1 ..... dry
18-16-15 Berry, Penguin Oil Co. 3 50
7-16-16 Tatum, Plateau Oil Co. 1 ..... dry
20-16-15 Hicks, Pure Oil Co. 1 45
23-16-15 Long, Ray et al 1 ..... dry
3-16-15 Alphin, J. H., Standard Oil Co. 9 125
11-16-15 Alphin, J. H., Standard Oil Co. 15 15
12-16-17 Hodges, Steele et al 3 ..... dry
9-16-15 Flenniken, Sunny Jim Oil Co. 2 20
1-16-17 Neely, Sutherland et al 4 40
26-17-14 Williams, Wabler et al 1 ..... dry
1-16-17 Johnson, Wall et al 1 ..... dry
4-16-15 Hays, Wilson, Nye, 4 175

Wells completed 34
Production 1490
Dry 15
Gas 1
Gas production 30,000,000

OUACHITA COUNTY

24-15-17 Reynolds, Arkansas Drilling Co. 1 50
20-15-16 Rowland, Atlantic Oil Producing Co. 75
26-15-17 Smith, Clark, H. E., 2 45
26-15-17 Yarbrough, Clark, H. E., 2 60
23-15-17 Reynolds, Cumberland Petroleum Co. 1 590
23-15-17 Reynolds, Cumberland Petroleum Co. 2 400
26-15-16 McKenzie, Duho Oil Co. 4 137
31-15-16 Forest City Box Co., Ellis & Dumas 1 90
31-15-16 Forest City Box Co., Ellis & Dumas 2 90
27-15-16 Cramer, J. A., Forest Oil Co. 17 125
28-15-16 Mullins, Forest Oil Co. 1 ..... dry
28-15-16 Hughes, Galloway et al 2 100
26-15-17 Smith, W. A., Galloway et al 4 30
2-16-15 Henry Murphy, Gulf Refining Co. 2 40
23-15-17 Reynolds, Gulf Refining Co. 1. 120
26-15-17 Werner, Gulf Refining Co. A-7 50
27-15-16 Mullins, Hildreth et al 1 50
23-15-17 Anderson, Hunt et al B-6 225
23-15-17 Anderson, Hunt et al B-7 150
23-15-17 Green, Hunt et al B-5 500
24-15-15 Ferris, Johnson, D. N., 2 50
21-15-16 Ritchie estate, Johnson Drilling Co. 1 ..... dry
26-15-17 Brown, Magnolia Petroleum Co. 2 80
21-15-16 Smith, Magnolia Petroleum Co. 10 45
4-16-15 Hays, Marine Oil Co. 3 160
28-15-16 Mullins, Marr Oil Corp. 3 45
28-15-16 Mullins, Marr Oil Corp. 4 15
23-15-15 Berry, Mazda Oil Co. 1 125
29-15-16 Pincher, Mazda Oil Co. 2 30
23-15-17 Green, Riggs et al 1 55
28-15-16 Stringfellow, Ross et al 1 200
24-15-15 Snyder, Roxana Pet. Corp. 2.. 75
30-15-15 Berg, Simms Oil Co. E-2 150
36-15-17 Shirey, Smith, J. S., B-1 40
30-16-16 La Grone, Stumph & Todd 4 ... dry
23-15-17 Reynolds, The Texas Co. 2 20
31-15-16 Smith, W. A., The Texas Co. 7. 50
31-15-16 Smith W. A., The Texas Co. 8. 65
31-15-16 Stout Lumber Co., The Texas Co. 5 65
23-15-17 Ward, The Texas Co. 1 40
23-15-17 Ward, The Texas Co. 2 40
20-15-16 Schoolhouse, Winner et al 1 50

Wells completed 42
Production 4337
Dry 3

COTTON VALLEY

24-21-10 Pardee, Alabama Petroleum Co. B-1 100
24-21-10 Pardee, Alabama Pet. Co. A-3.. 200
29-21-10 Smith, Alabama Pet. Co. 1..... 220
24-21-10 Hope estate, Crusaders Pipe Line Co. B-4 200

24-21-10 Hope estate, Crusaders Pipe Line Co. B-5 300
14-21-10 Merritt, S. J., Fortuna Oil Co. 4 ..... gas
24-21-10 Bodcau, Humble Oil & Ref. Co. B-4 150
26-21-10 Bodcau, Humble Oil & Ref. Co. B-6 60
28-21-10 Bodcau, Humble Oil & Ref. Co. B-7 ..... gas
22-21-10 Bodcau, Humble Oil & Ref. Co. B-9 ..... gas
22-21-10 Bodcau, Humble Oil & Ref. Co. B-10 ..... gas
24-21-10 Davis, Humble Oil & Ref. Co. 2 260
13-21-10 Davis, Humble Oil & Ref. Co. 3 350
26-21-10 Nelson, Louisiana Oil Refining Corp. 2 50
28-21-10 Coyle, Moffatt & Murphy 2 300
13-21-10 Bodcau, Ohio Oil Co. 11 285
28-21-10 Bodcau, Ohio Oil Co. 12 ..... gas
27-21-10 Bodcau, Ohio Oil Co. 14 ..... gas
29-21-10 Miller, Palmer Corp. 1 ..... gas
28-21-10 Tillman, Palmer Corp. 1 ..... dry
21-21-10 Coyle, Raymond, S. S., et al 1. dry
18-21- 9 Hodges, A. J., Woodley Petroleum 1 ..... dry

Wells completed ..... —
Production 22
Dry 2575
Gas 3
Gas production 68,000,000

CADDO

5-20-16 Rives, H., et al. Gross et al 1.. 30
22-20-16 Ferry Lake, Gulf Refining Co. 219 ..... —
24-22-15 Caddo Mineral Land Co., Lewis Oil Corp. 5 35
22-21-15 Crye, Tholl Oil Co. 12 40
5

Wells completed ..... —
Production 4
..... 110

NEVADA COUNTY, ARK.

10-14-21 Womack, E. E., Ames et al 1.. 50
10-14-21 McKinney, Smitherman-McDonald 8 300

Wells completed ..... —
Production 2
..... 350

LOUISIANA WILDCATS

Bossier Parish—
31-16-11 Vanhoore, Arkansas Natural Gas Co. A-4 ..... gas
25-16-12 Hodges, Palmer Corp. B-6 ..... gas
14-17-12 Roscoe, Skannall et al 1 ..... gas
31-16-11 McDade, J. T., Standard Oil Co. 4 ..... dry
18-18-11 Johnson, Standard Drilling Synd. 1 ..... dry

Claiborne Parish—
26-21- 5 Fortenon, Woodley & Collins 1.. dry

La Salle Parish—
20-20-2e Urania, Urania Petroleum Co. 4 dry

Morehouse Parish—
27-21- 4 Fee, Stovall Drilling Co. 1 .... gas

Ouachita Parish—
3-21- 4 Tensas, Natural Gas Producing Co. 4 ..... gas
4-20- 4 Trezevant, Ouachita Natural Gas Co. 3 ..... gas
21-19- 5 Morgan Palmer Corp. 2 ..... gas
7-19- 5 Fee, Southern Carbon Co. 42... gas
36-20- 4 Cole, United Oil & Gas Co. 2... gas

Webster Parish—
27-23-11 Frazier, Arkansas Fuel Oil Co. 1 ..... dry
28-23-11 Pine Woods Lumber Co. 6 .... dry
6-22- 9 Wiley, T. R., Bethany Oil & Gas Co. 2 ..... gas
9-23-10 Roberts, Haehnlen, T. W., trustee 1 ..... gas
25-23-10 Tinsley, F. M., The Texas Co. 1 dry
31-23- 9 Porter-Wadley, J. K., 1 ..... gas

Wells completed ..... —
Production 19
Dry 0
Gas 6
Gas production 94,500,000

ARKANSAS WILDCATS

Drew County—
5-13- 8 Harris, Rhodes et al 1 ..... dry

Nevada County—
6-15-22 Fincher, C. A., Humble Oil & Ref. Co. 1 ..... dry
7-14-20 Moss, Southern Oil Co. 1 ..... dry

Wells completed ..... —
Production 3
Dry 0
..... 3

UNION COUNTY, ARKANSAS

Rigs

8-16-16 Bilyew, Anderson et al 1.
1-16-17 L. Werner, Arkansas Drilling Co. 3.
7-16-16 Carroll, Chambers Drilling Co. 1.
26-16-16 Burton, Cherokee Petroleum Co. 8.
3-16-15 Graves, Crusader Oil Production Co. 5.
8-16-16 Hodges, W. H. Gilliland A-2.
6-16-16 L. Werner, Gulf Refining Co. 29, 30.
2-16-17 Clawson, Hargett et al 1.
3-16-15 Williams, Howell et al 3.
5-16-15 J. S. Murphy, Keene & Woolf 1.
22-16-14 Terrell, Lemond et al 1.
19-16-15 Powell, Magnolia Petroleum Co. 4.
8-16-15 Murphy, Natural Gas & Petroleum Co. 6.
15-16-15 Craig, Pure Oil Co. 11.
5-16-16 Saxon, Smitherman-McDonald B-4.
14-16-15 Craig, United Central Oil Corp. 6.

Wells Drilling

7-16-15 Hatfield, Arkrado Oil Co. 5.
8-16-15 Bradley and Calvert 2.
21-16-15 Jones, British Allied Estate 2.
8-16-15 Bradford, Broderick & Calvert 2.
25-15-12 Burton, Cherokee Petroleum Co. 7.
19-16-15 Alphin, J. W., Clark 3.
9-16-15 Palmer, J. W. Clark 1.
14-16-15 Giller, Crawford & Sebastian 3.
13-17-15 Ezell W. A. Dellmeyer, Trustee 1.
4-19-16 Bradley, Doern et al 1.
2-16-15 Alphin, Gulf Refining Co. 11.
5-16-16 L. Werner, Gulf Refining Co. 18, 28.
3-16-15 Graves, Hickman et al 1.
3-16-15 Miller, Houston Oil Co. 1.
18-16-15 F. G. Murphy, W. W. Jones et al 1.
21-16-14 Davis, Liberty Oil Co. 1.
17-16-15 Allgulf, Lion Oil & Refining Co. 4.
13-16-17 Campter-Campbell, Magnolia Petroleum Co. 4.
16-16-16 Harris, Magnolia Petroleum Co. 3.
12-16-17 N. J. Scott, Magnolia Petroleum Co. 1.
2-16-17 T. G. Smith, Magnolia Petroleum Co. 2.
11-19-12 Teele, Matthews et al 1.
10-16-15 Lawton, Natural Gas & Petroleum Co. 1.
8-16-15 Murphy, Natural Gas & Petroleum Co. 5.
13-19-17 Fee, P. F. O'Brien 1.
10-16-15 Pate, Ohio Oil Co. 5.
20-16-15 Hicks, Pure Oil Co. 2.
30-16-15 Lawton, Pure Oil Co. 1.
17-16-15 LeCroy, Rogers et al 2.
1-16-17 Hodges, Rutledge, Trustee 4.
5-16-16 Laney Heirs, Simms Oil Co. 1.
23-18-16 Hicks, Smitherman-McDonald 1.
3-16-15 J. H. Alphin, Standard Oil Co. 6.
16-16-14 Goodwin, Ward et al 1.
6-16-16 Rice, Weatherbee et al 3.
1-18-17 Hodges, Wright et al 2.

Shut Down

14-19-11 Union Saw Mill, Beery et al 1.
12-16-16 Kane, Field Operators Co. 1.
16-16-15 Edwards, Owen Trustee 2.
9-16-15 Flenniken, Sunny Jim Oil Co. 1.
Rigs, 17; wells drilling, 41; total, 58.

OUACHITA COUNTY

22-15-17 Wells, Atlantic Oil Producing Co. B-2, B-5.
31-15-16 Forest City Box Co. Ellis & Dumas 4.
4-16-15 Umsted, George & Jones 3.
30-15-16 McRea, Gilliland et al 6.
32-15-15 S. Bennett, Gulf Refining Co. 2.
32-15-16 Werner, Gulf Refining Co. 32.
23-15-17 Halton, H. L. Hunt et al 3.
23-15-17 Green, Riggs et al 2.
30-15-15 Berg, Simms Oil Co. E-3.
35-15-17 Shirley, J. S. Smith A-2.
27-15-16 Hardin, Sun Co. 4.
34-15-15 Joyce, Sure Oil Co. 2.
28-15-16 Hughes, Sutton et al 8, 10.
23-15-17 Green, Whittaker et al 1.
23-15-17 Anderson, Whittiken et al 5.

Wells Drilling

24-15-17 Reynolds, Arkansas Drilling Co. 4.
11-15-17 Elliott, Bray-Hawthorne 1.
12-15-17 Goodwin, Bray-Hawthorne 1.
28-15-16 Hughes, Burton, trustee 3.
21-15-16 Hughes, Burton Trustee 11.
26-15-17 Smith, R. E. Clark 3.
23-15-17 Reynolds, Cumberland Petroleum Co. 3.
31-15-16 Forest City Box Co., Ellis & Dumas 3.
30-15-15 Bradley, Empire Gas & Fuel Co. 4.
27-15-16 J. A. Cramer, Forest Oil Co. 1, 11.
20-15-16 C. Minor, Forest Oil Co. 3.
26-15-16 Hardin, Giles et al 1.
26-15-16 Neeley, Foster & McWilliams 1.
36-15-17 LaGrone, Gilliland et al B-5.
33-15-16 Fincher, Gulf Refining Co. 8.
5-16-15 Goodwin, Gulf Refining Co. A-4.
2-16-15 Henry Murphy, Gulf Refining Co. 3.
23-15-17 Reynolds, Gulf Refining Co. 2.
26-15-17 Werner, Gulf Refining Co. A-8.
29-15-16 Fincher, Hazen et al 1.
3-16-15 Williams, Howell et al 2.
23-15-17 Anderson, H. L. Hunt et al A-4.
23-15-17 Halton, H. L. Hunt et al 1, 2.
23-15-17 School House, H. L. Hunt et al 1.
26-15-17 Street, H. L. Hunt et al 4.
34-15-15 Ferris, D. N. Johnston 3.
27-15-16 Jackson, J. W. King, 2.
28-15-15 Churchyard, Kourey et al 1.
4-16-15 Berg, Leon et al 2.
26-15-17 Brown, Magnolia Petroleum Co. 4.
33-16-15 Berry, Mazda Oil Co. 2.
23-15-17 Smith, Owens et al 2.
27-15-16 Hardin, Penguin Oil Co. 2.
25-15-17 Brierton, Reynolds et al 4.
23-15-17 Green, Riggs et al 3.
25-15-17 Wells, H. A. Schmuller 1.
36-15-17 Shirey, J. S. Smith B-2.
2-16-15 Alphin, Standard Oil Co. 1.
36-15-17 Smith, Staples et al 4.
26-15-17 Jeffus, Staves et al 4.
23-15-17 Reynolds, The Texas Co. 3, 4, 5, 6.
23-15-17 Green, Timberlake et al 1.

Shut Down

20-15-16 Minor, Boger et al 2.
13-15-17 Copenhaven, Bray-Hawthorne 1.
6-13-18 Lampkin Fee British Allied Estate 1.
22-15-17 Riley, Hammon et al 1.
5-16-15 Hill, Invaders Oil Co. 1.
5-16-15 Umsted, Olvey et al 1.
16-14-18 S. A. Graves, Reynolds & Thompson 1.
35-15-17 Shirey, J. S. Smith 1.
22-15-17 Hoffman, Southern Oil Co. 1.
32-15-15 Umsted, Standard Oil Co. 12.
28-15-16 Hughes, Sutton et al 9.
5-16-15 Goodwin, Wilson Petroleum Co. 1.
Rigs, 17; wells drilling, 59; total, 76.

WEBSTER PARISH, LOUISIANA

Rigs

19-21- 9 Coffee, Alabama Petroleum Co. 1.
24-21-10 Pardee, Alabama Petroleum Co. A-4, B-2.
38-23-11 S. P. G. Arkansas Fuel Oil Co. 1.
13-21-10 Hope Estate, Crusader Pipe Line Co. B-10, B-11, B-12, B-14.
24-21-10 Hope estate, Crusader Pipe Line Co. B-13.
27-23-10 Pine Woods Lumber Co., Fortuna Co. 1.
19-20-10 Ambrose, Kennedy et al 1.
28-21-10 Gray, Louisiana Oil Refining Corp. 2.
28-21-10 Miller, Moffatt & Murphy 1.
22-21-10 C. V. Bank, Ohio Oil Co. 2.
27-21-10 Gray, Ohio Oil Co. 1.
23-21-10 Holloway, Ohio Oil Co. 2.
15-21-10 Cox, Ruston Drilling Synd. 1.
25-23-10 Lewis, Texas Co. 1.
28-21-10 Gleason, Tidal Oil Co. 2.

Wells Drilling

19-21- 9 Ramsey, Alabama Petroleum Co. 1.
34-23-10 Martin, Richie & Laskey 1.
35-23-11 Wheeler, Butler & McMurray 1.
13-21-10 Hope Estate, Crusader Pipe Line Co. B-6.
24-21-10 Hope Estate, Crusader Pipe Line Co. B-7, B-8, B-9.
15-21-10 W. Cox, Fortuna Oil Co. 2.
19-21- 9 Crichton, Fortuna Oil Co. 1.
33-23-10 Nickerson, Fortuna Oil Co. 1.
13-21-10 Bodcau, Humble Oil & Refining Co. B-8, B-11.
13-21-10 Bodcau, Humble Oil & Refining Co. Co. B-12.
13-21-10 Davis, Humble Oil & Refining Co. 4.
26-21-10 Gray, Humble Oil & Refining Co. 1, 2.
14-21-10 S. S. Merritt Humble Oil & Refining Co. 4.
34-21-10 J. Moore, Humble Oil & Refining Co. 1.
21-23- 9 Armor, Louisiana Oil Refining Corp. 1.
13-21-10 Bodcau, Louisiana Oil Refining Corp. 1.
22-21-10 Lindsay, Louisiana Oil Refining Corp. 3.
15-20-10 Hortman, McDowell et al 1.
15-21-10 Bodcau, Ohio Oil Co. 13.
28-21-10 Bodcau, Ohio Oil Co. 15.
13-21-10 Bodcau, Ohio Oil Co. 16, 17.
16-21-10 Harris, Ohio Oil Co. 1.

Shut Down

13-21-10 Bodcau, Humble Oil & Refining Co. B-5.
28-21-10 Nelson, Louisiana Oil Refining Corp. 3.
8-20- 9 Bible, Stack & Eggers 1.
Rigs, 19; wells drilling, 30; total, 49.

COLUMBIA COUNTY, ARKANSAS

Stephens Field

Wells Drilling

36-15-20 Watson, Magnolia Petroleum Co. 2.

NEVADA COUNTY

Rigs

10-14-21 Womack, Autrey Oil Co. 3.
15-14-21 Blacke, Ames et al 1.
10-14-21 Womack, Ames et al 2.
10-12-23 Snell, Garrett et al 1.
8-15-22 J. D. Pitt, Humble Oil & Refining Co. 1.
10-14-21 McKinney, Zing et al 1.1

Wells Drilling

10-14-21 McKinney, Greason et al 1.
10-14-21 Drake, Smitherman-McDonald 3.

Shut Down

30-14-20 Phillips, Ouachita Valley Oil Co. 1.
10-14-21 Womack, Smitherman-McDonald 3.
16-14-21 Butcher, Steele & Sandlin 1.
22-10-23 Graves, Zing et al 1.
Rigs, 6; wells drilling, 6; total, 12.

CADDO PARISH

Rigs

10-18-16 R. T. Sharp, Brewer & Sewall 1.
5-20-15 Doan Thigpen, Fortuna Oil Co. 14.
17-18-16 Mitcell, Fortuna Oil Co. 1.
5-20-16 H. Rives et al, W. M. Gross et al 2.
22-23-16 Rodessa Oil & Land Co., Rowe-Daniels et al 1.

Wells Drilling

13-21-15 Louisiana State, Dixie Oil Co. 4.
14-21-15 W. B. & L. L. Noel, Dixie Oil Co. B-1.
14-17-16 Agurs, Ford et al 1.
8-17-16 J. H. Bryson, Fortuna Oil Co. 1.
23-21-15 Robertshaw, Fortuna Oil Co. 10.
9-17-16 Florsheim, Glassell & Myers 1.
21-20-16 Ferry Lake, Gulf Refining Co. 221.
8-19-18 Louisiana Live Stock & Planting Co., Haynes Bros. 1.
6-16-16 Agurs, Proven Production Co. 1.
15-20-16 Federal Jeems Bayou, The Texas Co. 1.
23-21-15 Caddo Mineral Lands Co., The Texas Co. 43.
23-21-15 Bashara, Tholl Oil Co. 9.
13-21-15 Houston Ice & Brewing Co., Tholl Oil Co. 1.

Shut Down

30-15-15 Nickerson, Arkansas Caddo Oil Co. 1.
2-16-15 Gardner Blades, Caddo Western Oil Co. 1.
31-21-15 Brown Fee, Muslow Oil & Gas Co. 4.
9-20-16 J. B. & H. C. Reynolds Oil & Gas Co. 4.
11-18-15 Bostwick, D. C. Richardson 1.
11-23-16 Pitts, B. T. Smith, Trustee 1.
17-17-16 Hunting Club, Waterman Drilling & Development Co. 1.
Rigs, 6; wells drilling, 20; total, 26.

BELLEVUE

Wells Drilling

15-19-11 Bliss & Weatherbee, G. W. Weatherbee, B-15.

LOUISIANA WILDCATS

Rigs

32-23-11 Bolinger, Arkansas Natural Gas Co. 1.
4-18-12 Atkinson, McClure & Ferrell 1.
5-21- 6 Morman, Clark & Melat 1.
1- 7-1w Ball, Grant Parish Pet. Co. 2.
22-10-10 Ballard, R. O. Roy 1.
1-19-4e Central, Palmer Corp. 1.
7-19-5e Fee, Southern Carbon Co. 45.
18-22-2w J. P. Voss, Roxana Petroleum Co. 1.

Wells Drilling

30-17-16 Bryan, Roxana Petroleum Co. 1.
31-16-11 D. J. McAnn, Davis & Hanby 1.
30-16-11 Hodges, Palmer Corp B-7.
11-20-13 Bernstein, Thigpen & Herold 1.
4-22-11 Holland, G. W. Weatherbee 1.
21-14-4e Fee, Culver et al 1.
22-19- 5 Fields, Claiborne Lincoln Synd. 3.
13-22- 7 McElwee, El Dorado Chief Oil Co. 1.
5-19- 5 Taylor, J. P. Evans et al 1.
6-12-11 Christine, Texas Co. 30.
22-11-12 Patterson-Roinson, L. V. Ulrey 1.
22-11-2e Urania, Gulf Refining Co. A-1.
27-10-2e Louisiana Central Lumber Co., Stovall Drilling Co.
18-10-2e Urania, Urania Petroleum Co. 5.
19-22- 5 Crossett, Natural Gas Production Co. 14.
35-20-5e Pratt, Oil Fields Exploration Co. 1.
13-20- 4 R. Watson, Oil Fields Exploration Co. 1.
24-18-2e Goodwin, Dickson & Frue 1.
14-19-4e Richland, W. C. Feazel 1.
10-19-5e Fee, Ladell et al 32.
12-19-4e McHenry, Montgomery et al 1.
37-19-4e Glazier, Marrison et al 1.
31-19-5e Fee, Southern Carbon Co. 43
7-19-5e Fee, Southern Carbon Co. 44.
2-14-10 Conley, Tarver et al 1.
8- 7-12 Bowman Hicks Lumber Co., L. M. Emlet 5.
6-19-2e Feazel, Jones Walker Oil Co. 1.
16-22-3e James, Simms Oil Co. 1.
6-10-2w E. Eages, J. R. Hall 1.

Shut Down

24-23-12 Badcau, Atlantic Oil Producing Co. 2.
31-21-11 Rhodes, Coker et al 1.
36-11-14 Pollock, Greyhound Synd. 1.
8-12-14 Sutherland, Dr. C. C. Wright et al 2.
21-11-2e Urania, Bur Ban Oil Co. 2.
22-10-2e Urania, Columbia Oil & Gas Co. 1.
13-20-3w Barrett, Buckner et al 1.
26-20-5e Perry, McKenzie et al 1.
27-10-10 C. M. Durr, R. O. Roy 1.
6-16-5e Jones, J. P. White et al 1.
13-12-10 Marston Coushatta Synd. 1.
2-14-9[illegible] Fee, LaGrande et al 3.
8- 7-12 Bowman Hicks Lumber Co.,L. M. Emlet 4.
7-23-1e Frost Johnson Lumber Co. Love et al 1.
18-23-1e Templeton, J. F. Palmer 1.
17-23-1e Clark, Union Parish Drilling Co. 3.
5-12-1w McCarty, Galloway & Arrendale 1.
Rigs, 8; wells drilling, 46; total, 54.

ARKANSAS WILDCATS

15-17-22 Gantt, F. R. Maier et al 1.
8- 4-12 Meek, Hill & Arnold 1.
33-10- 6 Jones, Bennett et al 1.
22-14-26 Gillespie, Munn Oil & Gas Co. 1.

Wells Drilling

1-19-22 W. E. Hardy, Arkansas Fuel Oil Co. 1.
29-19-20 Peter Doss, Kentucky Arkansas Petroleum Co. 1.
30-18-19 Phil Lindsay, Magnolia Develop- Co. 1.
14-18-21 Davis, Phillips et al 1.
5-13- 8 Harris, Rhodes et al 2.
27-12-27 Hempstead County Gun Club, Grassy Lake Oil Assn. 1.
22-11-24 Clarke, J. G. Wooten 1.
7- 3-10 Hinsley, DeCou Oil Co. 1.
3-20-24 Red River Land Co., Kenaw Petroleum Co. 2.
3- 9- 8 Fee, Cambrain et al 1.
2-13-31 Allen, Grote et al 1.
12-20-28 Thomas, Dr. F. P. Nigh et al 1.

Shut Down

36-12- 9 McTwiston, Rhodes et al 1.
26-16-13 Freeman Smith, Harris & Bickley 1.
35-10-20 Burroughs, Southern Drilling Co. 1.
23-18-23 Robinson, Brown et al 1.
24-17-22 Sauter, Harpin et al 1.
30-19-18 Hays, Hosey McDonald 1.
16-17-22 Sorrell, Johnson et al 1.
20-16-12 Watts, Miller et al 1.
12-17-22 Fullenweider, Moore et al 1.
35-18-19 Duffer, Smith & Compton 1.
1-19-21 Williams, Virgil Heath Trustee 1.
10-13- 6 Karnes, Graves et al 1.
12-13- 6 Trotter, King & Wilson 1.
23-13- 7 Fee, Stenke et al 1.
8- 6-11 Pike, Haley & Evans 1.
17-11-26 Nichols, Hempstead Oil Co. 1.
17-12-23 Yates, Orr et al 1.
25-16-25 Renfrow, Wilcox et al 1.
15-13-29 Goodrum Timber Co., Gaines et al 1.
10-11-31 Hawkins, Johnson et al 1.
13-14-28 Thompson, A. G. Kress 1.
Rigs, 4; wells drilling, 33; total, 37.

GULF COAST

Summary of Field Operations

Dist—	Comp.	Prod	Dry	Gas	Rigs	Drg.	Ttl.
Batson	4	10	3	0	0	2	2
Blue Ridge ..	0	0	0	0	1	1	2
Barber Hill ..	0	0	0	0	0	1	1
Big Creek ...	1	0	0	0	0	1	1
Damon Mound	0	0	1	0	2	6	7
Edgerly La. ..	0	0	0	0	3	0	3
Goose Creek..	7	635	1	0	1	3	4
Humble	2	1,000	0	1	4	13	17
Hull	10	930	1	0	1	4	5
Jennings La.	3	65	0	0	3	17	20
Markham ...	0	0	0	0	0	3	3
Orange	5	3,150	2	0	0	2	2
Spindletop ...	1	35	0	0	4	24	28
Pierce Junc...	3	4,200	1	0	0	1	1
Sarata	1	20	0	0	3	2	5
Sour Lake ...	7	225	1	0	0	1	1
Vinton, La..	6	200	2	0	1	5	6
W. Columbia .	5	45	3	0	0	2	2
South Liberty	1	350	0	0	0	1	1
Misc. (G. C.)	8	10	7	0	12	37	49
Total Jan...	64	10,875	32	0	44	131	175
Total Dec. .	64	8,952	26	0	27	140	167
Difference	0	1,823	3		17	9	8

Southwest Fields

Luling	5	1,850	0	0	4	9	13
Laredo	2	200	0	0	2	9	11
Calliham	2	0	0	2	0	3	3
Jim Hog Cty.	6	5,050	1	0	6	15	21
Miscellaneous	4	0	4	0	20	50	70
Total Jan. .	19	7,100	5	2	32	86	118
Total Dec. .	14	5,000	3	0	38	90	128
Difference .	5	2,100	2	2	6	4	10
Grand Total—							
For Jan. ..	83	17,975	28		76	217	293
For Dec. ..	78	13,952	29		65	230	295
Difference .	5	4,023	1		11	13	1

WELLS COMPLETED

BATSON

King, Cavitt et al 2 ..... sw abd
Wing, Gulf Prod. 158 ..... wtr
Hodges, Anderson & Munson 2 ..... abd
Condon, Ada Belle Oil 82 10

Wells completed 4
Production 10
Abandoned 3

BIG CREEK

Davis, Gulf Prod. 16 ..... abd

Wells completed 1
Abandoned 1

GOOSE CREEK

H. Smith, Gulf Prod. 15 (wo) 100
Smith, Humble Oil & Ref. 47..... sw
Chapman-Bryan, Gulf Prod. 8 200
Galliard, Gulf Coast Oil 40 75
Tabb, Gulf Prod. 8 (wo) 75
Wright, Gulf Prod. 21-A 35
Wright, Gulf Prod. 1 (wo) 150

Wells completed 7
Production 635
Salt water 1

HUMBLE

Rankin, Kane Prod. 1 ..... gas
Landslide, Texas Co. 243 (wo) 1000

Wells completed 2
Production 1000
Gas 1

HULL

Dolbear, Republic Prod. 48 (wo) 75
Dolbear, Republic Prod. 93 75
Dolbear, Republic Prod. 96 125
Dolbear, Republic Prod. 97 200
Dolbear, Republic Prod. 95 75
Phoenix, Gulf Prod. 43 100
Morris,Phillips, Gulf Prod. 8 ..... abd
Guidry, Humble Oil & Ref. 18 250
Hannah, Humble Oil & Ref. 1-B ..... abd
Barngrover, Houston Prod. 12 75

Wells completed 10
Production 930
Abandoned 1

JENNINGS

J. C. Ogden Oil 1 20
SFS, Ogden Oil 1 (wo) 25
Latrielle, The Texas Co. 49 25

Wells completed 2
Production 45

ORANGE

Brown, Brownie Babbittee Oil 1, 2 (wo) abd
Cow Bayou, Rycade Pet. 8-E 1000
Belle Isle, The Sun Co. 2 150
Cow Bayou, Rycade Pet. 1-E ..... abd
Chesson Orange Pet. 8 ..... sw

Wells completed 5
Production 2150
Abanded and salt water 3

PIERCE JUNCTION
Howe, H. R. Cullen 5 ..... abd
Taylor, Gulf Prod. 9 (wo) 700
Fitzsimmons, Texas Exploration 6 (wo) 3500

Wells completed 3
Production 4200
Abandoned 1

SPINDLETOP
Gladys, Williams Oil 1 35

Wells completed 1
Production 35

SARATOGA
Gulf, Cotton Oil 5 20

Wells completed 1
Production 20

SOUR LAKE
Fee, The Texas Co. 296 (wo) 35
Carpenter, M. E. Peveto 10 20
Hardin, Lake View Oil 41 10
Hardin, Lake View Oil 38 (wo) 75
B E & Sun Co. 59 10
Fee, Minor Oil 74 ..... dry
Hardin Humble Oil & Ref. Co. 38 (wo). 75

Wells completed 7
Production 225
Dry 1

VINTON
Vincent, Vinton Pet. 14 60
Parks, Wilson & Broach 6 (dpng)..... sw
G. N. G., Gulf Ref. 45 35
Gray, The Texas Co. 1 75
Vincent, Edgerly Pet. 1 30
Vincent, Gulf Ref. 2 ..... sw

Wells completed 6
Production 200
Salt water 2

WEST COLUMBIA
Coon, Humble Oil & Ref. Co. 5 ..... abd
Pipkin-Lee, Humble Oil & Ref. 13 ..sw abd
Abrams, The Texas Co. 9 (wo) 20
McGregor, Hyde Prod. 4 25
McGregor, Hyde Prod. 6 ..... abd

Wells completed 5
Production 45
Abandoned 5

MISCELLANEOUS (GULF COAST)
Brazoria County—
Dannebaum, Stratton Ridge Oil 14 10
Nash, Rycade Pet. 3 ..... abd
Jefferson County—
Big Hill, Sun-Pipkin, Houston Oil 1 ... abd
Liberty County—
Fee, The Texas Co. 2 ..... dry
Barbee, Hofer Oil 1 ..... abd
Milam County—
Smith, Sinclair Oil & Gas 1 ..... abd
Wharton County—
Boling, Humble Oil & Ref. 10 (formation test) ..... abd
Walker County—
Lee, Gas Ridge Oil & Gas 1 ..... abd

Wells completed 6
Production 10
Abandoned 7

BATSON
Wells Drilling
Texas, East Batson Oil 2.
Paraffine Oil, Acorn Oil 51.
Wing, Gulf Prod. 161.
Wells drilling, 3.

BLUE RIDGE
Rigs
Blakely, Gulf Pro. 10-C.
Wells Drilling
Latscher, Gulf Prod. 7.
Invincible, Gulf Prod. 2.
Rigs, 1; wells drilling, 2; total, 3.

BIG CREEK
Rigs
Ahlers, Rich et al 2.
Lingua, The Texas Co. 1.
Wells Drilling
Fee, The Texas Co. 1.
Wheat, Gulf Prod. 9.
Davis, Gulf Prod. 9 (dpng), 17.
Fee, Freeport Sulphur Co. 10.
Rigs, 3; wells drilling, 5; total, 7.

BARBER HILL
Wells Drilling
Collier, S. J. Hindman 1.
Wells drilling, 1.

DAMON MOUND
Rigs
Bryan, Hamm & Co. 2, 3.
Rigs, 2.

EDGERLY
Rigs
Bright-Penn, Gulf Ref. 7 (dpng).
Wells Drilling
Lilliard, G. W. Gray 11.
Fairchilds, Lake Charles Pet. 5 (wo).
Hunter, Roxana Pet. 1.
Rigs, 1; wells drilling, 3; total, 4.

GOOSE CREEK
Rigs
Hog Island, Humble Oil & Ref. 2.
Scorrgea, Inca Prod. 1.
M & G, The Sun Co. 5 (dpng).
Paddock, Gulf Prod. 3 (dpng).
Wells Drilling
Tabb, Humble Oil & Ref 6-A.
Smith, Humble Oil & Ref. 59, 60.
J. Galliard, Gulf Prod. 18.
State land, Gulf Prod. 17.
Tabb, Gulf Prod. 10.
Hirsch, Gulf Prod. 1 (dpng).
Wright, Gulf Prod. 4 (dpng).
Galliard, Gulf Coast Oil 31 (wo).
Duke, Inca Prod. 2.
Wright, Southern Exploration 2.
Busch, Hagen Pet. 2.
Bryan, Copeland Oil 5.
Rigs, 4; wells drilling, 13; total, 17.

HUMBLE
Rigs
R. E. Burt, Sun Co. 27.
Wells Drilling
Landalde, Southern Pet. 13 (wo).
Griffith, Meadors et al 1.
Long, Machias Bros. 3.
Cherry, Webb Oil 17.
Rigs, 1; wells drilling, 4; total, 5.

HULL
Rigs
Guedry, Humble Oil & Ref. 10 (wo).
Dolbear, Republic Prod. 100.
Stengles, Yount-Lee Oil 1 (wo).
Wells Drilling
Merchant, Humble Oil & Ref. 1.
Mecom, Mecom Oil 6, 7.
Dolbear, Republic Prod. 32, 36, (wo); 90, 98.
Hannah, Texas and Vacuum Cos. 4.
Taylor, Higgins Oil & Fuel 5.
Barngrover, Empire Gas & Fuel 16.
Scarborough, Gulf Prod. 14, 15.
Phoenix, Gulf Prod. 30 (wo); 44, 45, 46.
Baldwin, Gulf Pro. 11.
Rigs, 3; wells drilling, 17; total, 20.

JENNINGS
Wells Drilling
Arnaudt, Gulf Ref. 35.
Producers, Manley et al 9 (wo).
SFS, Port City Oil 2.
Wells drilling, 3.

MARKHAM
Wells Drilling
Gray, Rycade Pet. 1 (dpng); 2.
Wells drilling, 2.

ORANGE
Rigs
Granger, Gulf Prod. 4.
Kishi-Lang, Gulf Production 9.
McGuire, Kishi Dev. 5 (dpng).
Granger, Sinclair Oil & Gas 4.
Wells Drilling
Brown, Brownie Babbittee Oil 4.
Brown, Sun Co. 3.
Cow Bayou, Rycade Pet. 14-A, 2-C.
Winifree, Am. National Oil 1 (sd).
Chesson, Humble Oil & Ref. 9-B, 10 (sd); 14-A, 21-B.
Winifree, Humble Oil & Ref. 11.
Chesson, Mutual Oil 4, 7, 9, (wo's).
State land Tillery Oil 1.
Gunstream, the Sun Oil Co. 6.
Jackson, Supreme Oil 1.
Winifree, Orange Pet. 9 (sd).
State land, Andrews-Cameron Co. 2 (sd).
Hammam-Consolidated, Gulf Prod. 2.
Peveto, Gulf Prod. 8.
Hager-Moore, Gulf Prod. 3.
Cherson, Gulf Prod. 2, 3, 4 (wo's).
Rigs, 4; wells drilling, 24; total, 28.

PIERCE JUNCTION
Taylor, Gulf Prod. 11 (dpng).

SPINDLETOP
Wells Drilling
Gladys, McKinney Oil 1.

SARATOGA
Rigs
BBB, Gulf Prod. 33.
Petty, Regna Oil 1.
Hooks, Skinner Oil 1 (dpng).
Wells Drilling
Texas Crude, the Sun Oil Co. 1.
Bryant, Rio Bravo Oil 3.
Rigs, 3; wells drilling, 2; total, 5.

SOUR LAKE
Wells Drilling
B. & E., the Sun Oil Co. 60.
Bashara, McNamara Oil 12.
Fee, Minor Oil 75.
Wells drilling, 2.

VINTON
Rigs
Harmony, Vinton Pet. 8.
Wells Drilling
Rescue, Vinton Pet. 7.
Vincent, The Texas Co. 11.
Star, Gulf Ref. 34.
Lisso, Edgerly Pet. 2.
B. Gray, The Texas Co. 1.
Rigs, 1; wells drilling, 5; total, 6.

WEST COLUMBIA
Wells Drilling
Pipkin-Lee, Humble Oil & Ref. 13 (sd).
McGregor, Hyde Prod. 7.
Wells drilling, 2.

SOUTH OF LIBERTY, LIBERTY COUNTY
Rigs
Chambers, Humble Oil & Ref. 1.
Pickett, Humble Oil & Ref. 1.
Vanderbetter, Gulf Prod. 1.
Minchey, The Texas Co. 1.
Harrison, Monarch Oil & Ref. 1.
———, Oxford Oil 1.
———, Hofer Oil 1.
———, Bashara et al 1.
———, Esperson Estate 1.
———, Jewett et al.
Wells Drilling
Pickett, Mills Bennett 1.
Rivere, Humble Oil & Ref. 1 (dpng); 2.
———, Vacuum Oil 1.
Rigs, 10; wells drilling 3; total, 13.

MISCELLANEOUS GULF COAST
SOUTHWEST FIELDS
WELLS COMPLETED
Luling—
River Bed, E. S. Smith, trustee 3..... 250
M. Mercer, United North & South Oil 11 300
Gideon, United North & South Oil 7.... 200
Proctor, United North & South Oil 10.. 850
McKean, Armstrong & Deirock 1 250

Wells completed 5
Production 1850
Laredo—
Los Ojulas, Wheatley Oil 13 100
Los Ojulas, Magnolia Pet. 15..... 100

Wells completed 2
Production 200
Calliham—
Lowe, D. C. & M. C. Syndicate 1..... gas
Lowe, D. C. & M. C. Syndicate 2..... gas

Wells completed 2
Gas 2
Jim Hogg County—
Holbein, Buchanan & Bailey 1 300
Holbein, O. W. Killiam 1 250
Holbein, Alsworth Brothers ..... abd
Holbein, Kisselman & St. Albans 1....1500
Holbein, Witherspoon Oil 3 1500
Holbein, Plateau & T. P. C. & O. 1...1500

Wells completed 6
Production 5050
Abandoned 1

MISCELLANEOUS
SOUTHWEST COUNTIES
Bexar County—
Adkins, Dixie Oil 1 ..... dry
Guadalupe County—
Seguin, Mid-Kansas Oil & Gas 1..... dry
Pryor, Rutledge et al 1 ..... dry
Uvalde County—
Kincaid, Humble Oil & Ref. 1 ..... dry

Wells completed 4
Dry 4

LULING
Rigs
M. Mercer, United North & South 12, 14.
Allen, United North & South 26.
River Bed, E. S. Smith 4.
Wells Drilling
Trammel, United North & South 9.
Fields, Echols Cade Drlg. Co. 3.
Callahan, United North & South Oil 1.
Pryor, Rutledge et al 1.
Lentz, Stebbins Oil & Gas 1.
Battle, Burnam et al 1 (sd).
Schubert, Magnolia Pet. 13, 14.
Pryor, Green & Ross 1.
Lynch, Jennings et al 1.
Rigs, 4; wells drilling, 9; total, 13.

LAREDO
Rigs
Los Ojulas, Magnolia Pet. 16.
Los Ojulas, Wheatley Oil 14.
Wells Drilling
Aviators, Swiftsure Pet. 1.
———, United States Oil & Gas 1.
———, National Oil Ref. 1.
———, Morgan-Gibble Co. 3.
Brunl, Cole Pet. 6, 7.
Petty, Boyd Oil 1 (sd).
———, Rydal Oil 9.
———, Morgan & Co. 1.
Rigs, 2; wells drilling 9; total 11.

JIM HOGG COUNTY
Rigs
———, Buffum et al 1.
Vela, Russell et al 1.
———, Texo Oil 1.
Holbein, Plateau Oil 6, 7.
Holbein, Witherspoon Oil 5.
Wells Drilling
Thompson, Magnolia Pet. 3, 4.
Las Animas, Weber Oil 4.
Holbein, Shasta Oil 1.
Holbein, Witherspoon Oil 4.
Woods, Simms Oil 1.
Martinez, Henne-Winch & Fariss 7.
Holbein, O. W. Killiam 2, 3.
———, Bailey & Buchanan 2.
Holbein, Plateau Oil 2, 3, 4, 5.
———, Lang 1.
Rigs, 6; wells drilling, 15; total, 21.

MISCELLANEOUS GULF COAST
Rigs
Angelina County—
Henne, Ferdinand et al 2, 3.
Brazoria County—
Weedy pasture, Hinnple parties 1.
Clute, The Texas Co. 1.
Flu⅝pond, Gulf Production 1.
Chambers County—
Smith, northwest of Anahuac, H. J. Hindman 2 (sd).
Jefferson County—
Big Hill, Houston Oil 6 Stati.
South of China, Paggi Oil 2.
Harris County—
La Porte, Bay Shore Pet. 3 Grimes.
Cedar Bayou, C. T. Rucker 1.
Wharton County—
Boling Dome, Houston Oil & Ref. 3-A, Watkins.
Montgomery County—
McMasters, National Ref. Co. 1.
Wells Drilling
Brazoria County—
Bryan Heights, Bryan Prod. 1 (dpng).
Stratton, Dannebaum, Stratton Ridge Oil 15.
Nash, Rycade Pet. 2, 4.
Brazos County—
Two miles south of College Station, Bryan Pet. 1.
Duval County—
Singer, Humble Oil & Ref. 6.
Mosquito, Mosquito Oil 1.
Dinn, Cooperative Drlg. 2 (sd).
Fort Bend County—
Moore, Gulf Prod. 3.
Davis, Pathfinder Oil 6.
———, Nelian Oil & Ref. 1.
Galveston County—
High Island, Guidry, Yount-Lee Oil 5-1.
Brassard, the Sun Oil Co. 2.
Gordon, Patton Oil 2 (sd).
Fee, Mayning Oil 2.
McCarthy, Green Oil 1.
Smith, Gulf Prod. Co. 2.
Harris County—
Near Westfield, Trinity Copper 1 sd.
Hunt, Wright et al 1 (sd).
River, 6 miles east of Humble. Kansas Prod. 2.
Jefferson County—
Big Hill, Houston Oil 5.
Matagorda County—
Hawkins, Creesland et al 4.
Dwyer, Marland Oil & Ref. 1.
Jackson County—
Harwood, Vanderbilt Pet. 1 (sd).
Wharton County—
Doling Dome, Felder, Gulf Prod. 3.
Boling Dome, Cloud, Gulf Prod. 2.
Walker County—
Wiser Bluff, Ridge Oil & Gas 1 (sd).
Grimes County—
———, Causeland et al 3 (sd).
Washington County—
Southwest of Brenham, Fitzgerald 1 (sd).

SOUTH LOUISIANA
Calcasieu Parish—
Bordages, Vacuum Oil 1.
Parquah, Vacuum Oil 1.
Heywood, Part City Oil 1 (sd).
Cameron Parish—
High Island, Yount-Lee Oil 4.
Hackberry—
Pine Oil Co. 1.
Evangeline Parish—
Tate, Ville Platte Oil 1.
Acadia Parish—
Heywood, O. Abshire 1.
Jeff Davis Parish—
Ervine, Yount-Lee Oil 1.
Rigs, 12; wells drilling, 37; total, 49.

MISCELLANEOUS
SOUTHWEST COUNTIES
Rigs
Bexar County—
Swearengen, Aviators Oil 1 (sd).
Oliver, Southern Nat. Gas 12.
Cohen, Gas Ridge Dev. 6.
Atacosa County—
———, Green et al. 1.
Guadalupe County—
Krueger, Mid-Kansas Oil & Gas 1. Three miles east of Marion.
Live Oak County—
Cartwright, Houston Oil 8.
Church, north of Oakville, The Texas Co. 1.
Nichol, C. Pickett, 1. Southwest of Whitesett.
Hidalgo County—
King, Humble Oil & Ref. 1.
Bastrop County—
South of Smithville, M. A. Currie 1.
South of Smithville, Lynch et al 1.
Kreulik Frank McDent 1.
Wilson County—
Southeast of Floresville, O. H. Powell 1.
Medina County—
Northwest of D'Hanis, Plate et al 1.
Southwest of D'Hanis, Plate et al 1.
Northwest of Floresville, Arnett Oil 1, 2.
Duval County—
Piedras Pintas, A. L. Jack 1.
Walsh, Noleda, Humble Oil & Ref. 3.
Karnes County—
North part of county, Sherset & Lane 1.
Kennedy County—
King, Humble Oil & Ref. 1-A, 2-A, 3-A. (Formation tests).
Wells Drilling
Atascosa County—
Tom Ranch, Eiser & De Lange 2.
Peeler, Texacosa Oil 1.
McAda, Tripps Drilling Co. 1.
Bexar County—
Swearengen, Buckeye Oil 1. South Medina River.
Applewhite, Applewhite et al 1 (sd).
Engleman, Ray Oil 1.
South of Adkins, Dixie Oil 2.
Comal County—
Hoyes, Gulf Royalty 1.
Bastrop County—
Ott, Cardinal Oil 1.
Valenta, J. W. Gray 1.
English, Sigler, Fikes and Ragsdale 1.
English, Bristol Oil & Gas 1.
East of Bastrop, Corey Oil & Gas 1.
Fayette County—
North of Flatonia, Houston parties 1 (sd).
Gillespie County—
———, Wealder Oil 1 (sd).
Grimes County—
Three miles west of Iola, L. F. McClausseland 1.
Guadalupe County—(See Luling)—
Gonzales County—
Five-mile Creek, Compton et al 1.
———, Allider Oil 1.
Lavaca County—
Southeast of Yoakum, Yoakum Drilling Co. 1 (sd).
Karnes County—
Hyatt, Allidor Drilling 1 (sd).
Near Runge, E. B. Reynolds 1 (sd).
West of Falls City, S. J. Mounts 1 (sd).
North of Kenedy, Russell & Williams 1 (sd).
Medina County—
———, Witherspoon Oil 1 (sd).
Southeast of Hondo, Krone & Willis 1.
South of Devine, Amy Oil 1 (sd).
Northwest of D'Hanis, Calif-Medina Oil 1 (sd).
San Patricio County—
Collins, Plateau—Texas Pacific C. & O. 3.
———, Sigmund et al 2 (sd).
Live Oak County—
Cartwright, Houston Oil 6, 7.
South of Fant City, Ayres & Hawley 2 (sd).
West of Lucas, Kerr & Gillette 1 (sd).
North of Three Rivers, Southern Nat. Gas 1.
South of Tilden, San-Balt Oil 1 (sd).
Zapata County—
Survey 617, R. K. Bateman 1.
Survey 307, O. W. Killiam 1.
Haynes, Hill et al 1.
Vela, Panuco Prod. 1.
Val Verde County—
Moore, Rio Bravo Oil 1.
Moore, Reclamation Oil 1 (sd).
Russell, East Del Rio Oil 1 (sd).
Wilson County—
Nine miles west of Floresville, Garrett et al 1.
Northeast of Stockton, Rosaline Oil 1.
Eight miles west of Floresville, Mahone et al 1.
South of Lavernia, Douglas & Thomas 1.
Uvalde County—
Kincaid, Ballard & Underwood (sd).
Flores, Clark Prod. 1 (sd).
Nineteen miles south of Sabinal, A. N. Taylor 1.
Kincaid, Houston Oil & Ref. Co. 2.
Zavalla County—
Pryor, Hadley et al 1 (sd).
Rigs, 20; wells drilling, 50; total, 70.

ROCKY MOUNTAIN AREA

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Tl.
Big Muddy ...	0	0	0	0	0	3	3
Salt Creek ...	19	4,712	0	0	68	66	134
Lance Creek ..	0	0	0	0	0	4	4
Big Horn Basin	0	0	0	0	9	51	60
Lost Soldier ..	1	240	0	0	4	38	42
Rock River ...	0	0	0	1	1	14	15
Fremont Co. .	2	300	1	0	0	25	25
Osage	0	0	0	0	7	11	18
Natrona Co. ...	1	0	1	0	1	16	17
Lincoln and Uintah Co. .	0	0	0	0	4	9	13
Baxter Basin .	0	0	0	0	1	11	12
Miscellaneous .	0	0	0	0	0	23	23
Total Jan. ..	29	5,152	7	1	97	269	366
Total Dec. .	43	4,215	7	2	91	281	372
Difference .	14	937	0	1	6	12	6
MONTANA							
Sunburst	5	30	3	0	12	37	50
Miscellaneous .	2	0	1	1	8	96	104
Total Jan. ..	7	30	4	1	21	133	154
Total Dec. .	17	2,380	7	2	13	103	116
Difference .	10	2,350	3	1	8	30	38
COLORADO							
Total January.	6	120	5	0	14	35	99
Total December	1	0	1	0	14	75	89
Difference ..	5	120	4	0	0	10	10
UTAH							
Total January.	0	0	0	2	1	26	27
Total December	3	0	1	1	1	26	27
Difference ..	3	0	1	1	0	0	0
NEW MEXICO							
Total January.	3	180	0	0	3	26	29
Total December	0	0	0	0	2	30	32
Difference ..	3	180	0	0	1	4	3

WYOMING
BIG MUDDY FIELD
Wells Drilling
8-32-76 ———, Humphrey Oil Co. 28.
2-32-76 Fenix, Mutual Oil Co. 4.
8-32-76 Carey, Texas Prod. Co. 32.

SALT CREEK
Rigs
19-40-78 SW, Wyoming Oil Fields 31-A.
24-40-79 SE, Wyoming Oil Fields 24-A.
24-40-79 SE, Wyoming Asso. 4-A.
30-40-78 SW, Wyoming Asso. 21-A.
30-40-78 NW, Wyoming Asso. 6-A.
30-40-78 SE, Wyoming Asso. 19-A.
24-40-79 SE, Wyoming Asso. 1-A and 13-A.
31-40-78 SW, Salt Creek Cons. 16-A.
31-40-78 SE, Salt Creek Cons. 16-A.

6-39-78 SE, Mt. and Gulf 8-A.
19-40-78 SW, Midwest Oil Co. 6-A.
13-40-79 SW, Midwest and Wyo. Asso. 4-A.
25-40-79 SE, Midwest and Wyo. Asso. 22-A.
13-39-79 SE, Blackstone, Salt Creek F-4.
5-39-79 SW Carter Oil Co. R-12.
30-39-79 Teapot Oil & Land Co.
26-40-79 SW, Wyoming Asso. 24-A.
17-39-78 SE, Marine Oil Co. M-2 and M-8.
19-40-78 NE, Continental Prod. 3-BS.
32-40-78 NW, Continental Prod. 12-B.
24-39-78 SW, Mammoth Oil Co. 302.
34-40-78 NW, Mammoth Oil Co. 205.
28-39-78 NW, Mammoth Oil Co. 405.
28-39-78 SE, Mammoth Oil Co. 406.
11-39-79 SW, E. T. Williams Oil Co. 2-A.
13-38-78 SW, Wyo. Teapot Oil Co. 1.
16-39-78 NE, Nicalaysen et al 1.
10-38-78 NW, Mammoth Oil Co. 202.
19-40-79 NE, Norris Oil Co. 18-A.
8-39-78 NE, Western States Oil Co. 21-A.
11-39-79 NW, Salt Creek Cons. 2-A.
19-40-79 SW, Midwest Oil Co. 36-A.
26-40-79 SE, Midwest Oil Co. 1-A.
17-39-78 NW, Western States O. & L. 13-A.
29-40-79 SW, Continental Prod. 6-S and 7-S.
5-39-78 NW, Carter Oil Co. 12-D, 13-D.
2-39-79 SE, Sinclair Wyoming 11.
1-39-79 SE, Mutual Oil Co. 11-A.
2-39-79 SW, Mutual Oil Co. 3-A.
5-39-79 SE, M. B. Shuster 15-A.
20-39-78 Tract E. T., Ohio Oil Co. 7.
12-39-78 Castle Rock, Ohio Oil Co. 11.
12-40-79 NW, Wyoming Asso. 33-A.
23-40-79 SE, Wyoming Asso. 15-A.
24-40-78 NE, Wyoming Asso. 33-A.
24-40-78 SE, Wyoming Asso. 36-A.
6-39-78 NE, Mt. & Gulf 29-A.
22-40-79 SE, Wyoming Oil Fields 3-A.
23-40-79 NW, Wyoming Oil Fields 1-A.
14-40-79 SW, Wyoming Asso. 3-A.
14-40-79 NW, Wyoming Asso. 33-A.
22-40-79 SE, Wyoming Asso. 4-A.
14-40-79 SE, Wyoming Asso. 31-A.
26-40-79 SE, Wyoming Asso. 34-A and 33-A.
31-40-78 SW, Salt Creek Cons. 15-A.
11-39-79 NW, Salt Creek Cons. 34-A.
35-40-79 NE, Midwest Oil Co. 4-A.
19-40-78 SW, Midwest Oil Co. 18-A, 19-A.
22-40-79 NE, Midwest Oil Co. 34-A.
35-40-79 NE, Midwest Oil Co. 3-A.
23-40-79 NE, Midwest Oil Co. 6-A.
35-40-79 NW, Wyoming Asso. 18-A.

Wells Drilling

26-40-79 NE, Wyoming Oil Fields 26-A.
30-40-78 SW, Wyoming Asso. 16-A.
14-40-79 SW, Wyoming Asso. 22-A.
35-40-79 NE, Midwest Oil Co. 25.
1-39-79 NE, Midwest Oil Co. 26-A.
12-40-79 NW, Midwest & Wyo. Asso. 24-A.
36-40-79 SE, Midwest & Wyo. Asso. 33-A.
18-40-78 NW, Kasoming Oil Co. S-3.
19-39-78 NW, Kinney Coastal 19-A.
2-39-79 SW, Mutual Oil Co. 4-LS.
23-40-79 NW, Wyoming Oil Fields 34-A.
26-40-79 NE, Wyoming Asso. 29-A.
12-40-79 SW, Midwest & Wyo. Asso. 2-A.
24-40-79 SE, Wyoming Oil Fields 36-A.
34-40-79 SE, Salt Creek Cons. 22-A.
25-40-79 NE, Midwest & Wyo. Asso. 1-A.
26-40-79 SE, Midwest & Wyo. Asso. 14-A.
5-39-79 SE, Carter Oil Co. P-15
7-39-78 NW, Salt Creek Cons. 15-A.
26-40-79 SW, Wyoming Oil Fields 24-A.

Shut Down

10-40-79 SE, Empire State Oil 25-A.
6-39-79 SW, Staley Synd. 5.
28-39-78 NE, Mammoth Oil Co. 101.
21-39-78 SW, Mammoth Oil Co. 304.
11-40-78 SW, Continental Prod. 1-W.
28-40-78 SE, J. C. Smith 1-S.
29-39-78 NE, Mammoth Oil Co. 108.
28-39-78 NE, Mammoth Oil Co. 304.
28-39-78 SW, Mammoth Oil Co. 302.
28-38-78 NW, Mammoth Oil Co. 205.
4-38-78 NE, Mammoth Oil Co. 101.
23-39-79 NE, Evans Oil Co. 1.
29-39-78 NW, Omaha Lusk Oil Co. 1.
2-38-78 NE, Teapot Dome Synd. 34-A.
27-40-79 SW, Salt Creek Cons. 36-A.
6-39-78 NE, Mt. & Gulf 34-A.
17-39-78 SE, Marine Oil Co. M-7.
2-39-78 SE, Sinclair Wyo. 16.
34-39-79 SW, Mutual Oil Co. 35-A.
7-39-78 SE, Mutual Oil Co. 1 and 2.
28-40-79 SW, Jupiter Oil Co. 27-A.
26-40-79 NE, Wyoming Asso. 18-A.
15-40-79 NE, Wyoming Asso. 21-A.
35-40-79 NW, Wyoming Asso. 15-A.
34-40-79 SE, Wyoming Asso. 21-A.
30-40-78 SW, Wyoming Asso. 13-A, 15-A.
24-40-79 NE, Wyoming Asso. 22-A.
31-40-78 NW, Salt Creek Cons. 6-A, 1-A.
31-40-78 SE, Salt Creek Cons. 21-A, 22-A.
27-40-79 SE, Midwest Oil Co. 31-AX.
26-40-79 SW, Midwest Oil Co. 13-AX.
14-40-79 NE, Midwest Oil Co. 15-A, 17-A.
1-39-79 NE, Midwest Oil Co. 3-A.
12-40-79 SW, Midwest & Wyo. Asso. 4-A.
13-40-79 SW, Midwest & Wyo. Asso. 3-A.
1-39-79 NE, Midwest & Wyo. Asso. 4-A.
30-40-78 NE, Bonfils Oil Co. 31-A.
24-39-79 NE, Mutual Oil Co. 22-AS.
36-40-79 SE, Midwest & Wyo. Asso. 34-A.
18-40-78 SW, Marine (Wyokans) 5, 6.
Rigs, 63; wells drilling, 66; total, 134.

LANCE CREEK

Wells Drilling

26-36-65 Rodeo, Buck Creek Oil Co.

Shut Down

5-36-65 Lamb, Ohio Oil Co. 5.
18-35-63 NE, Union Oil Co. 1.
3-35-65 Belle Cattle Co., Mutual Oil Co. 7.

BIG HORN BASIN

Rigs

33-56-97 Cross Gas Co., Ohio Oil Co. 2.
23-44-95 Flavin, Ohio Oil Co. 1.
5-47-96 Hetzler, Ohio Oil Co. 1.
2-44-96 ——, F. A. McPherson.
32-56-97 Howell, Occidental O. & G.
33-55-95 ——, Westland Oil Co.
17-46-98 Washakie 12, Ohio Oil Co. 1.
7-46-98 Washakie 6, Ohio Oil Co. 2.
20-53-101 NE, Taylor Brothers.

Wells Drilling

20-53-100 NE, Pittsburgh & Southwestern.
3-42-92 NE, Union Oil Co. 2.
3-55-97 Griffin, Allen Oil Co.
10-54-95 SE, Westland Oil Co.
15-49-91 ——, Shaffer & Tilley.
8-51-100 Sonners, Ohio Oil Co. 2.
31-42-90 ——, Utah Oil & Ref. Co. 3.
5-42-91 Murphy Dome, Prod. & Ref. 1.
20-46-98 Mill Iron, Ohio Oil Co. 68.
11-45-97 SE, Midwest Refg. Co. 1.
31-46-90 Tensleep, Ohio Oil Co. 2.
18-46-98 Washakie, Ohio Oil Co. 4.
35-57-97 Cowley, American Indian Oil 1.
28-44-93 ——, West Zimmerman Butte Oil.
19-46-98 Meeteesee, Midwest Refining Co. 16-A.
3-42-92 ——, Union Oil Co.
4-50-100 NW, Florence Oil Co.
16-45-95 Westland Oil Co.
35-43-91 Utah Oil & Refining Co. 2.
3-35-97 Royalty & Holding Co.
8-51-100 Union Oil Co.
4-50-100 Flynn & Ache 1.
11-49-102 Omar Oil & Gas.
19-26-93 Ridgley, Midwest Ref. Co. 19-A.
18-46-98 SW, Midwest Ref. Co. 20-A.
34-43-93 ——, C. D. Markham et al.
31-56-96 ——, California Co. 1.

Shut Down

5-57-99 NW, Homestake Oil & Gas.
1-47-100 NW, Midwest Ref. Co. 1.
34-42-91 Lake Creek, Union Oil Co.
17-52-101 Fifty Six Pet. Co.
31-48-99 SW, Midwest Refg. Co. 18.
26-46-100 NE, Producers & Ref.
28-44-93 NE, F. A. McPherson.
10-55-97 ——, Byron Superior Oil.
29-56-97 NE, Utah Southern Oil.
11-49-102 ——, T. A. Stancliff.
2-47-100 NE, Midwest Ref. Co.
34-56-97 Linton, Allen Oil Co.
31-40-99 NW, Kasoming Oil Co. 1.
22-40-91 SW, Olympus Oil & Gas.
17-49-91 ——, Frontier Oil & Gas.
27-46-98 Rankin, Dickie Oil Co.
8-46-98 ——, Grass Creek Prod.
12-45-97 Midwest Ref. Co.
2-56-97 Jones, Allen Oil Co.
3-56-97 Beck Pet. Co.
16-47-100 Big Horn Dev. Co.
17-46-98 Tunador Oil Co.
30-56-97 Prod. & Ref.
19-51-92 Bruce Holding Co.
Rigs, 9; wells drilling, 51; total, 60.

LOST SOLDIER DISTRICT

Rigs

14-20-88 Lake Valley Oil Co.
29-23-88 SE, Prod. & Ref. 1.
22-26-87 Govt. Land, Sand Hills Oil Co.
36-25-89 NE, Prod. & Ref. 2.
11-26-90 Prod. & Ref. 6.
13-21-88 E. R. Goode.

Wells Drilling

26-25-89 Sherard, E. R. Goode et al.
34-26-88 NW, Prod. & Ref. 1.
25-26-88 SE, Hughes Royalty Co.
10-26-90 U. S. Petroleum.
22-26-90 NW, Texas Prod. Co.
17-26-89 SW, Prod. & Refg.
32-26-87 NE, Prod. & Ref. 2.
26-23-88 Bair Oil Co.
2-26-90 Producers & Refiners 1.
20-21-80 NW, Producers & Refiners 1.
12-24-89 Govt. Land, Producers & Refiners.
7-26-89 Producers & Refiners 3 and 4.
25-26-88 Kasoming Oil Co. 2-D.
27-26-87 Producers & Refiners 23.
11-26-90 NE, Bair Oil Co. 1-C.
12-26-90 Texas Prod. Co.
8-25-88 NE, General Pet. Co. 2.
20-20-90 U. P., Producers & Refiners 1.
26-20-88 Hatfield No. 2 Oil Co.

Shut Down

21-26-86 Portland Wyoming 3.
28-26-86 Portland Wyoming 2.
9-26-86 SE, Sand Hills Oil Co.
9-25-86 Govt. land, Sand Hills Oil Co. 2.
4-26-90 SE, Sand Hills Oil 4.
3-26-90 SW, Sand Hills Oil 5.
33-26-88 NE, Prod. & Ref. 3.
23-26-87 SE, Marvin Oil Co.
28-26-88 Govt. Land, Columbia Pet. Co.
21-26-88 Portland Wyoming 1.
9-29-90 Major Oil Co.
2-26-90 SE, Producers & Refiners 1.
14-26-90 Bair Oil Co. D-3.
34-27-90 SW, Annabell Wyoming Oil.
35-25-88 M. M. Armstrong.
24-26-87 SW, Producers & Refiners 20.
Rigs, 6; wells drilling, 36; total, 42.

ROCK RIVER DISTRICT

Rigs

Foote Creek, Kasoming Oil Co.

Wells Drilling

19-18-77 U. P., Ohio Oil Co. 1.
25-21-79 SE, Southwestern Pet. Co.
26-21-97 SE, Southwestern Pet. Co. 1.
25-16-77 Rex Dome Oil Co.
25-16-77 Repollo Oil Co.
34-23-79 Allen Lake, Laramie Synd.

Shut Down

32-16-74 Govt. Land, G. A. Briggs et al.
24-16-17 G. R. McConnell et al.
12-19-78 SW, Prairie Dog O. & G.
36-21-79 NW, Southwestern Pet. Co.
34-23-79 Central Pipe Line Co.
14-16-77 H. & H. Oil Co.
10-18-77 Carbon Co. Oil.
12-20-77 McLaughlin et al.
Rigs, 1; wells drilling, 14; total, 15.

FREMONT COUNTY

Wells Drilling

3- 1- 2 NE, Teton Petroleum Co.
Sand Draw, Riverton Pet. Co. 1.
15-40-101 Mack Oil Syndicate.
23-32-95 Producers & Refiners 1.
22- 6- 2 Miles City Oil Corp.
9-31-98 Martin F. Fold et al.
26- 5- 2 Connelly Oil & Gas.
Shoshoni Dist., Wyoming Syndicate.
9-32-95 NE, Producers & Refiners 2.
15-34-90 Ward Oil Co.
34- 6- 3 Kinney Coastal Oil Co.
22- 1- 1 McDonald et al.
4-31-98 Derby Dome-Wyoming Oil.
4-31-98 Burnside Oil Co.
24-32-90 Meyers Pet. Co. 1.

Shut Down

7-27-95 Van Wyo., Prairie Oil & Gas.
18-27-97 Prairie Oil & Gas.
19-27-95 Prairie Oil & Gas.
5-32-94 SE, McLennin & Ketch.
6- 6- 2 SW, Union of California 2.
15- 6- 2 Union of California 13.
21- 1- 1 Bridger Oil Co. 1.
29-27-95 Fremont Petroleum Co.
18-27-95 Sage Creek Pet. Co.
15-32-95 NE, Producers & Refiners 3.
Rigs, 0; wells drilling, 25; total, 25.

OSAGE

Rigs

31-47-63 L. B. Hanson.
31-47-63 West Royalty Oil Co.
Fawcett Ranch, Manlove et al.
31-46-63 Clark et al.
17-46-63 LaFleiche Oil Co.
19-46-63 Sinclair Wyoming Oil.
31-46-63 Lusk Royalty Oil Co.

Wells Drilling

18-46-63 W. J. Zitterall et al.
10-45-61 Lehart & Briggs.
17-47-63 Wyoming Oil & Gas.
18-46-63 Fred Gravestead.
5-46-63 Fletcher Brothers.
31-46-63 Tom Don Oil Co.
17-46-63 La Fleiche Oil Co.

Shut Down

11-45-65 Frederick Oil & Gas.
6-46-63 Osage Trust Co.
31-46-63 Bachellor Oil Co.
8-45-63 Griffith Oil Co.
Rigs, 7; wells drilling, 11; total, 18.

NATRONA COUNTY

Rigs

10-37-85 NE, Marland Oil Co.

Wells Drilling

23-33-79 Carroll, Casper Oil Synd.
11-32-82 New York Oil Co. 6.
Pine Mountain, Summit Oil Co.
30-29-87 Snoor Dome, Kinney Coastal Oil 1.
20-30-86 John Wyland et al.
22-36-82 California Co.
10-36-85 New York Oil Co.
9-35-85 New York Oil Co.
36-37-82 Midwest Ref. Co. 1.
23-34-82 Bradford Wyoming.
7-36-81 Arkansas Natural Gas Co.

Shut Down

31-40-80 Comet Syndicate.
5-39-80 Vernon Oil Co. 1.
9-41-80 Newcome et al.
25-36-85 NW, Midwest Oil Co. 1-B.
15-34-87 NE, Mutual Oil Co.
Rigs, 1; wells drilling, 16; total, 17.

LINCOLN AND UINTAH COUNTIES

Rigs

3-27-113 Wyotah Oil & Gas.
3-26-113 Newlon Oil Co. 3.
31-28-113 Tip Top Synd.
12-29-113 Clinton Oil Synd.

Wells Drilling

32-19-116 NW, Conger et al.
Near Afton, Great Western Oil Co.
4-26-113 Transcontinental Oil.
34-27-113 Wyota Oil & Gas.
22-21-117 Three States Oil Co.
1-28-114 Midwest Oil Co.
3-26-113 Superior Oil & Gas.

Shut Down

Afton District, Idaho Wyoming Oil.
1-28-114 Charles Lackey et al.
Rigs, 4; wells drilling, 9; total, 13.

BAXTER BASIN

Rigs

27-17-104 Montical Oil Co.

Wells Drilling

13-17-104 Producers & Refiners 1.
2-17-104 NE, Midwest Oil Co.
23-17-104 SE, Associated Oil Co.

Shut Down

8-16-104 Montical Oil Co.
10-16-104 Midwest Ref. Co. 6.
26-17-104 Associated Oil Co.
24-17-104 Montical Oil Co.
10-16-104 SE, Midwest Ref. Co. 29.
10-16-104 NW Midwest Ref. Co. 36.
25-18-104 Midwest Ref. Co. 29.
30-18-104 Midwest Ref. Co. 6-AX.
Rigs, 1; wells drilling, 11; total, 12.

MISCELLANEOUS

Wells Drilling

1-44-61 Salt Air Anticline, A. D. Moore et al.
28-47-63 NE, Gose Oil Syndicate.
24-26-62 NW, Foreman et al.
31-37-67 NW, Atlas Oil Co.
-45-62 George Shaw et al.
6-28-62 Jay Em, Foreman et al.
34-52-67 J. H. Duthie et al.
12-26-67 Platte River Development Co.
23-27-93 Associated Oil.
28-42-79 Seattle Syndicate.
20-21-80 Producers & Refiners 1.
16-21-80 Producers & Refiners 1.
26-27-61 Platte Wyoming Oil Co.
Guernsey District, Illinois Syndicate.
28-48-82 McL., Carter Oil Co.
21-48-82 Graham, Carter Oil Co.
Burris Dome, Montana Giant Oil.
Buffalo District, Kinney Coastal Oil.

Shut Down

31-50-69 Rozet Oil & Gas.
20-29-68 Nebraska Oil Co.
16-48-82 Belt, Carter Oil Co.
17-48-82 Hess, Carter Oil Co.
18-39-68 Glendo Oil & Gas.
Rigs, 0; wells drilling, 23; total, 23.

MONTANA

CAT CREEK

Rigs

12-15-28 NE, Shaffer Oil Co.

Wells Drilling

12-15-28 California Co.
31-15-30 Michael Masters et al.
8-15-29 Mutual Oil Co.
12-15-28 Catlet, Midnorthern Oil Co.
9-15-27 Peerless Oil Co. 2.
23-14-28 Winnet Pacific Oil Co.
1-15-29 Custer Oil & Gas.
28-16-28 Republic Peerless Oil Co.
9-15-29 NE, Frantz Corp.
7-15-29 NW, T. S. Hogan.
9-15-29 Mid-Northern Oil.
29-14-29 Flatwillow Oil.
27-15-27 Frantz Corp.

Shut Down

10-15-29 Fifty Six Pet. Co.
22-15-30 A. D. Miller et al.
11-15-30 Helena Cat Creek Oil.
8-15-29 Logan Corp.
15-15-30 Swartz et al.
11-15-30 Miles City Oil.
Rigs, 1; wells drilling, 19; total, 20.

KEVIN SUNBURST

Rigs

4-34- 2 Swears, Beardsley 1.
4-34- 2 NW, Bitter Creek Oil Co.
20-34- 2 McBride, Canadian American Oil Co.
31-35- 1 Chisholm Adams 1.
21-35- 2 Hecla-Sunburst-McManus 3.
8-34- 2 DeGroat, Kaufman McCrutcheon.
29-35- 1 Anderson, Miles City Oil 3.
25-36- 2 Keskin, Troy Inland 1.
17-35- 1 Potlatch Oil 2.
30-35- 1 Stannard Wallace Oil 2.
11-35- 2 Stockmans Bank, Ohio Oil Co. 2.
20-35- 2 Whitman Homestake Exploration.
30-52- 2 Hecla Oil Co.

Wells Drilling

29-35- 1 Anderson, Treasure State 2.
12-34- 2 Adams, Cooperative Pet. Co.
32-35- 1 Adams, Hibbing-Shuster 2.
21-27- 1 Beaupre Oil Co.
21-35- 3 Kevin Oil & Gas Synd.
24-35- 2 Coeur d'Alene-Hagerty 2.
3-34- 2 Frazier-Tenbrook 1.
4-34- 2 Hochspring, Weil Oil Syndicate.
8-34- 2 Pittsburgh-Montana Oil.
34-35- 3 Williams et al.
5-34- 2 Sweeney, Seattle Foster 2.
29-35- 1 Anderson, Sylvester Oil Co. 3.
32- 6- 2 Roundsley, Sunburst Oil & Gas.
22-35- 2 Newman, California Co.
21-34- 1 Stockmans Bank, Potlatch Oil & Gas.
24-33-1 Shelby Syndicate.
28-37- 2 McAlpine, Spartan Oil Co. 1.
20-35- 2 Halter, Sunburst Prod. Co. 3.
7-34- 1 Harte, Russell Oil et al.
18-34- 1 Skinner, Creel et al.
32-35- 1 Putnam, Keystone Oil Co.
4-35- 2 Moore, Queen City Oil 8.

Shut Down

34-35- 2 Jerring, First International.
25-35- 3 Roseth, Van Meer Oil Co.
5-34- 3 Mary, Eagle Oil Co.
30-35- 1 Stannard, Securities Pet. Co. 5.
17-34- 2 Huetis, Postalwait et al.
28-35- 1 Shelby-Federal Miller 1.
24-35- 3 Fryberger, Western Drilling Co. 1.
27-35- 3 Houston, Moffatt et al.
20-33- 1 Bailey, Flood Watson.
23-33- 1 Webb, Shelby Oil & Gas.
2-35- 1 Skilton, Sweetgrass Arch 2.
12-34- 1 Peterson, Lucky Forty Oil.
13-33- 2 Campbell, Campbell Syndicate 5.
16-34- 2 NW, Rainbow Oil Co.
1-34- 2 NE, Sunburst Oil & Gas.
Rigs, 13; wells drilling, 37; total, 50.

MISCELLANEOUS

Rigs

3-17- 4 NW, Ellaken Oil Co.
Livingstone Dome, Whiteside et al.
Porcupine Dome, Stellar Oil & Gas.
24-14-15 Fullerton Oil.
12-10-32 Hibberd Oil.
4-28-30 Mid-Northern Oil.
Coal Ridge, West Virginia Oil.

Wells Drilling

32-26- 2 NE, McCue-Doheny.
27-36-12 SW, Mountain Chief.
30-15-26 McDonald Creek, Wilson Fisher Co.
5- 3-16 Montana-Portland Oil Co.
10-10- 6 20 Dollar Bill Syndicate.
5- 1-31 NE, Allen Oil Co.
8- 4-23 NE, Hoosier Oil Co.
22- 2-25 Lake Basin Oil Co.
13- 1-21 Putnam, Mid-Northern Oil.
11- 1-29 NE, Absoraka Oil Dev.
23- 1-12 Keeler, Springdale Synd.
33-16-28 H. H. Swayne Jr.
9-31-19 California Co.
14-14-25 Flatwillow, A. M. Z. Synd.
28-16-27 Brush Creeek Synd.
28- 8-21 Absoraka Oil Dev.
32-25-20 Butler Oil & Gas.
24-20-12 Continental Production.
17- 3-19 Snyder, Mid-Northern Oil.
4-17-20 California Co.
26- 1-21 Modrell 2, Mid-Northern Oil Co. 2.
20-24- 1 C. A. McDonald et al.
4- 2-27 Mid-Northern Oil.
35- 1-21 Luce, Midwest Ref. Co. 31.
23- 2-21 Lindsay, Midwest Ref. Co. 13.
10- 5-97 Byron Superior Oil.

Shut Down

5-35-21-NE, F. G. Ostland.
10-18- 2 NW, Moscow-Idaho Oil.
9-12-14 Wilder, Glenhoma Oil Co.
9-10-39 SE, Stellar Oil & Gas.
23- 1-21 Price, Mid-Northern Oil 24.
20- 1-25 Stebbins, California-Absoraka.
27- 3-24 SE, Murry Brothers.
6- 2-24 American Indian Oil 2.
36- 1-12 State, Springdale Oil Synd.
20-25- 5 Larsen, Edwards et al.
2-26- 6 Jones, W. M. Edwards.
18-23- 3 SW, Elk Horn Oil & Gas Co.
18- 3 23 SW, Securities Prod. Co.
5- 2 24 NE, American Indian Oil.
24- 5- 8 SW, Potter Basin Oil & Gas.
35-32-32 SW, Bowdoin Oil & Gas.
7-27- 7 NW, Circle Oil Co.
25-10-39 Stellar Oil & Gas.
18-34- 4 Beck Petroleum Co.
18-24- 3 Cascade Oil.
2-28- 3 Dry Fork Oil.
26-10-39 Stellar Oil & Gas.
32- 4-16 Consolidated Oil & Gas.
13- 3-22 SE, Murray Brothers 3.
32-30- 2 Denzer, Drake Oil Co.
13- 3-23 Securities Prod. 4.
21-14-23 Black Hawk Oil.
22- 2-25 McMennamin et al.
18- 6-24 Minnemier & Newman.
3-12-25 Minnesota Flatwillow.
6-13-14 Fulton Oil.
26-14-20 NW, Jackson Oil.
30-15-26 Winnet Shallow Oil Synd.
22-23-12 Hager Stephenson.
7-27- 1 Tri City Oil.
18-26-26 Walker Bros.
Devils Basin, Alberta Block Coal Co.
25- 2- 7 Gladys Belle Oil.
Coalwood Dome, Annamay Oil Co.
Hailstone Basin, Hailstone Basin Oil.
Devils Basin, Montana Central Oil.
Devils Basin, Monarch Oil.
24- 5-17 Unit Oil & Gas.
23- 3-23 Davis Creek Synd.
33- 5-28 Beauvois Oil.
12-11-13 Kallspell Syndicate.
6- 2-25 Grey Eagle Oil.
31-15-45 Crow Rock Oil.
2- 2-26 Clork's Fork Oil.
11- 1- 1 Ruby Ridge Oil.
Rigs, 7; wells drilling, 77; total, 84.

COLORADO

Rigs

13-15-61 Panuco Exploration.
17- 8-68 Hog Ranch, Roland Oil Co.
10- 3-44 Yuma Valley Oil Co.
13- 1-46 Yuma Valley Oil Co.
1- 8-69 Morrell, Petroleum Prod. Corp.
17- 8-68 Fort Collins Chief Oil.
20- 2-46 General Oil Co. 1.
29-10-68 American Petroleum.
12-38-70 Green Mountain Petroleum.
31- 9-68 Midway Oil & Gas.
10- 2-70 NW, Mullin Syndicate.
27- 2-70 Rainbow Oil Dev. Co.
7- 9-68 Union of California.
28- 2-42 Strangway, Mutual Oil Co.

Wells Drilling

4- 6-68 Webster, Associated Oil Co.
1- 9-69 Thiming, Union Oil Co.
8- 9-69 Warren, Union Oil Co. of Colo.
25-24-61 SW, Utah Southern Oil.
30- 2-102 Midwest Refining Co.
22- 4-92 French, Midwest Ref. Co. 1.
22- 4-92 SE, Midwest Ref. Co. 2.
27- 4-92 NE, Midwest Ref. 3.
4-45-16 NW, Gilmore Oil Co.

3-21-69 SE. Fox Hills Oil.
1-26-63 Baxter, Salida Oil & Ref.
3-2- 64 Wright, Wrayfield Oil Corp.
13- 3-68 Ver Stratten, Union of California.
10- 3-68 Blunk, Union of California.
11-16-68 Buckeye, Union of California.
15- 3-69 Alpa, Gateway Oil Co.
15-21-65 Union of California.
10-27-65 NW, Lamar Oil Co.
5- 4-68 Majestic Oil Co.
3-33-13 Leidecker et al 2.
10- 2-70 Gehring, Haystack Oil Co.
17- 3-68 Meredith, Quaker Oil Co.
13-10-68 Hess, Union of California.
5- 3-68 Douglas Oil Co.
13-13-77 C. F. & I., Ohio Oil Co. 1.
13-16-68 Schultz, California Co.
11- 1-44 Hildrith, Hessick Drilling Co.
15- 3-68 Centennial State Pet.
12- 1-69 Prince, Ohio Oil Co.
11- 3-68 NW, White River Dev. Co.
5- 1-43 Hessick Drilling Co.
6- 3-102 Smith, Sun Oil Co.
20- 3-97 Harrison Syndicate.
16-16-69 Union of California.
6- 3-68 Ketterman, Colorado Oil Prod.
13-16-68 SE, Imperial Oil Prod.
4-32-66 Tulsa Oil Leasing Co.
11- 1-98 Morgan, Union of California.
16- 3-91 Marland Oil Co.
6- 4-67 Carter and Texas.
14-17-70 Mutual Oil Dev.
7-6-86 Texas, Prod. Co.
8-12-62 Ullum, Roland Oil Co.

Pueblo District, Choco Basin Oil & Gas.

23-21-65 Colorado Oil Co.
6- 3-68 Scott, Union of California.
16- 3-68 State, Union of California.
16- 4-92 Ahren, Yarg Prod. Co.
26- 1-92 Marland Oil Co.
26- 2-46 Herman, General Oil Co.
24- 3-68 Ruff, Victory Oil Co.
23- 3-69 Waverly, Consolidated Oil Fields Co.
4- 7-68 Lindemeier, Victory Oil Co.
35- 1-69 Eberhardt, Boulder Oil Corp.
19- 3-68 Meyers, Union of California.
21- 4-92 Midwest Refining Co. 4.
18-29-69 Panuco Exploration.
1-19-69 Brush Hollow, Mutual Oil.
18-20-69 Travis, Mutual Oil.
22- 3 68 Graham, Hobert Oil Co.
16- 3-68 Webster, Associated Oil Co.

Shut Down

13- 3-63 Hoff, Centennial & Sunset.
13- 3-68 Graham, Fort Collins Pet. Co.
19- 3-68 Harward, Great North, Inc.
24- 3-69 Hanna, Wellington Oil Co.
24- 3-70 Gehring, L. A. Deline.
24- 2-69 Johnson, Roland Oil Co.
15-21-65 Union of Colorado.
15-20-66 Ne-No-She Oil Co.
16- 5-91 Texas, Hogan Interests.
24- 4-93 Axial Basin, California Co.
31- 3-98 Union of California.
13- 4-89 Texas, Midwest, Transcontinental.
24- 2-43 Strangway, Mutual Oil Co.
30- 4-68 Thompson, Panuco Exploration Co.
4- 4-68 California Prod. Oil Corp.
23- 3-68 Chandler, Brendel & Ache.
23- 3-64 Eman Oil Co.
3-35-68 Las Animas Syndicate.
5-26-65 Moody Lake Oil Co.
24- 5-91 Rennie, Texas Prod. Co.
33- 5-91 Hamilton, Texas Prod. Co.
16- 4-91 State, Texas Prod. Co.
25- 5-91 Freeman, Texas Prod. Co.
36- 5-99 State, Producers & Refiners.

Rigs, 14; wells drilling, 85; total, 99.

UTAH

Rigs

18-23-21 Metropole Oil Co.

Wells Drilling

30-20-22 Utah Oil & Refining Co.
18-22-21 Utah Oil & Refining Co.
Virgin Field, Gustaven Oil Co.
Rozell District, Lakeside Oil Co.
24-25-21 Big Six Oil.
22- 3-24 SW, Producers & Refiners.
16- 2- 5 State, Western Empire Oil.
23-42-17 Monroe Oil Co.
Crescent Dome, Crescent Eagle Oil.
Diamond Fork, Gustaven Oil Co.
31-22-13 Union Oil of Utah.
27-41-19 Glockner, Utah Southern Oil.
32- 3-22 Utah Oil & Ref.
4-18-28 New York State Oil Co.

Shut Down

23-42-17 Monumental Oil Co.
12-19-13 Utah Oil & Ref.
17- 4- 6 Utah Southern & Ute Pet.
13-14- 9 Castledale Oil.
27-16- 4 Producers Oil.
Lakeside Dome, W. R. Holmes.
Diamond Fork, Franco Utah Oil.
25-13- 3 Utah Central Oil.
Harrisburg Dome, Virgin Oil Co.

Rigs, 1; wells drilling, 26; total, 27.

NEW MEXICO 4

Rigs

15-23-24 Florsheim, California Co.
5-30-13 H. L. Williams.
19-18-29 Keys et al.

Wells Drilling

28-18-28 Walker, Mitchell 2.
4-20-27 M. M. Miller.
16- 8-27 Danciger Brothers 1.
9-10-27 Danciger Brothers 2.
16-12-23 Zeppenfield Co.
32-18-28 Illinois Co. 6 and 7.
19-30-10 Lexi Oil Co.
31-32-13 Four States Oil Co.
20-29-11 Coal Creek Oil Co.
21-30-11 Home Gas Co.
30-18-29 SW, Burgess & Goodale.
30-18-28 Rotary Illinois.
29-18-28 Holman Person.
23-13-18 Vermejo, Union of California.
22-18-27 NW, Oscar Howard.
20-32-13 H. L. Williams 3.
34-21-26 Tracy, Ohio Oil Co.
17-21-13 H. L. Williams 4.
8-30-13 H. L. Williams 5.
23-23-13 Roy T. Clapp.
23-23-11 Blati Oil Co.
Ute Dome, J. A. Leidecker.
31-32-13 Four States Oil.
16-30-11 Aztec Oil Synd.
34-30-11 R. A. Carter et al.

Shut Down

16-32-14 Gypsy Oil Co.
29-17-27 Brainard & Welch et al.
6-14-13 San Juan Dev. Co.
12-29-13 Shiprock Oil Co.
25-39-12 Hall et al.
14-29-11 Hubble & Hall.

Rigs, 3; wells drilling, 36; total, 39.

WYOMING

WELLS COMPLETED

23-40-79	NW, Wyoming Oil Fields 26-A	62
26-40-79	NE, Wyoming Oil Fields 36-A	100
26-40-79	NW, Wyoming Asso. 21-A	75
26-40-79	SW, Wyoming Asso. 19-A	35
35-40-79	NW, Wyoming Asso. 4-A	555
30-40-78	SE, Wyoming Asso. 31-A	15
31-40-78	SE, Salt Creek Cons. 26-A	17
31-40-78	SE, Salt Creek Cons. 15-A	25
31-40-78	SW, Salt Creek Cons. 21-A	3
12-40-79	NW, Midwest & Wyo. Asso. 35-A	150
12-40-79	NW, Midwest & Wyo. Asso. 33-A	85
34-40-79	NE, Midwest Oil Co. 16-A	190
19-40-78	NE, Continental Prod. B-4	90
30-40-78	NE, Continental Prod. B-12	40
30-40-78	NW, Continental Prod. B-14	35
30-40-78	NE, Bonfils Oil Co. 29-A	115
32-40-78	SW, Mutual Oil Co. 29-A	100
35-40-79	NW, Wyoming Asso. 33-X	3000
32-40-78	NW, Continental Prod. 13-A	20
3-26-90	Goode, Texas Prod. Co.	240
23-16-77	U. P., Ohio Oil Co.	gas
4-19-78	Hutton Lake Oil & Gas	dry
32-16-74	Spindle Top Oil Co.	dry
18-15-75	Apex Oil & Refg. Co.	dry
18-15-75	Petroleum Oil Fields Co.	dry
14-15-75	Wyoming Hollow Basin	dry
5-32-94	SE, McLennen & Ketch	dry
38-41-81	Midwest Refining Co.	dry
15- 6- 2	SW, Union of California	200

Wells completed	29
Production	5152
Dry	7
Gas	1

MONTANA

24-35- 2	Bryne, Oil Prod. Synd.	20
16-33- 1	State, Mutual Oil Co.	dry
2-34- 2	Steele, Big West Oil Co.	dry
8-34- 2	Hurley, Claresholm Oil Co.	dry
4-34- 2	Corey, Crumley McKnight 7.	10
34- 7-16	Becker, California Co.	dry
3-31-19	Boyd, Montana Co. 2	gas

Wells completed	7
Production	30
Dry	4
Gas	1

COLORADO

16- 4-69	State, Midwest Ref. Co.	dry
30- 3-69	Gnome Oil & Ref. Co.	dry
9- 4-91	Meyers, Texas Prod. Co.	130
14-14-95	Mid-Colorado Oil Co.	dry
34-33-12	J. A. Leidecker et al	dry
28- 5-91	Hamilton Salt Creek	dry

Wells completed	6
Production	130
Dry	5

NEW MEXICO

29-18-28	Holman Person	40
28-18-28	Twinp Lake Oil Co.	100
32-18-28	Flynn, Welch & Yates	40

Wells completed	3
Production	280

READ THE

Classified Wants

Pages 110-111

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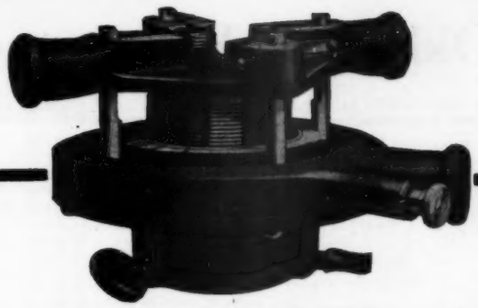

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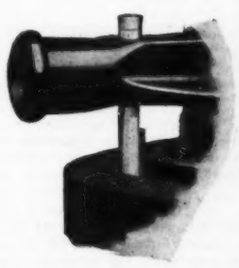

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE REPORT FOR DECEMBER

Runs

*Prairie P. L. Co.	3,255,000	105,000
Gulf P. L. Co.	1,246,402	40,207
Texas Pipe Line Co.	422,560	13,631
Magnolia Petroleum Co.	1,295,875	41,802
Empire Pipe Line Co.	867,313	27,978
Cosden Pipe Line Co.	795,149	25,649
*Sinclair Pipe Line Co.	1,016,800	32,800
*Other lines	9,300,000	300,000
Total	18,199,099	587,067
Total	18,145,414	604,847
Difference	53,685	17,780

Shipments

*Prairie Pipe Line Co.	3,857,754	124,444
Gulf Pipe Line Co.	1,023,605	33,020
Texas Pipe Line Co.	679,619	21,923
Magnolia Petroleum Co.	1,444,415	46,594
Empire Pipe Line Co.	1,029,203	33,200
Cosden Pipe Line Co.	923,597	29,793
*Sinclair Pipe Line Co.	2,592,857	83,641
Other lines	9,920,000	320,000
Total	21,471,050	692,615
Total	19,657,511	655,250
Difference	1,713,539	37,365

Stocks

	Bbls.
*Prairie Oil & Gas Co.	26,300,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	L
Gulf Pipe Line Co. and Gypsy Oil Co.	9,932,241
The Texas Co.	5,438,138
Magnolia Petroleum Co.	9,349,378
Empire Pipe Line Co.	2,980,745
Cosden Pipe Line Co.	2,731,377
*Sinclair Crude Oil Purchasing Co.	28,300,000
Carter Oil Co.	16,935,319
*Other lines	10,500,000
Total	114,467,198
Total	116,255,812
Difference	1,788,614

*Estimated. †Prairie shipments include also Texas crude. Sinclair shipments include also Texas and Wyoming crude.

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for November and December.

	Nov., '24	Dec., '24
Nat. Transit	155,466.95	146,919.77
S. W. Pa. P. L.	76,738.81	77,055.69
Eureka P. L.	313,985.41	325,500.22
Buckeye P. L. (Macksburg)	249,515.67	268,099.71
Buckeye P. L. (Cleveland)	12,628.22	10,908.43
Buckeye P. L. (Lima, etc.)	110,392.18	116,342.97
Indiana P. L.	9,906.55	9,313.04
Cumberland P. L.	317,529.60	332,426.69
N. Y. Transit	15,690.46	13,225.59
Tidewater P. L.	114,304.20	124,235.50
Pure Oil P. L.	173,772.14	181,667.26
Emery P. L.	37,435.54	41,081.18
Indian Ref.	48,956.23	46,543.37
Paragon Dev.	38,440.19	33,306.81
Pittsburgh P. L.	6,684.73	7,614.22
Riggs	7,103.24	
Total	1,688,450.12	1,730,240.45
Daily average	56,281.67	55,814.21

Note — Indian Refining Co. also reported other receipts of 341,917.64 bbls. Paragon Refining Co. had other receipts of 101,843.81 bbls. Paragon Development Co. had other receipts of 3,304.27 bbls. Pittsburgh Pipe Line had other receipts of 2,560.78 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for November and December.

	Nov., '24	Dec., '24
Nat. Transit	328,195.08	344,060.58
S. W. Pa. P. L.	76,738.81	330,866.53
Eureka P. L.	133,437.43	683,380.36
Buckeye P. L. (Macksburg)	79,776.94	98,280.80
Buckeye P. L. (Cleveland)	1,212.94	1,456.53
Buckeye P. L. (Lima, etc.)	605,841.51	775,735.14
Indiana P. L.	906,678.87	1,178,592.89
Cumberland P. L.	123,095.54	147,345.46
N. Y. Transit	770,271.02	671,474.49
Northern P. L.	128,548.45	191,021.77
Tidewater P. L.	116,150.08	143,854.20
Pure Oil P. L.	135,576.29	162,869.97
Emery P. L.	34,849.05	42,781.09
Paragon Ref.	110,767.16	105,948.04
Indian Ref.	460,627.79	412,965.43
Paragon Dev.	38,440.19	33,647.32
Pittsburgh P. L.	8,621.26	8,857.56
Riggs	2,314.39	
Total	4,272,010.39	4,693,138.16
Daily average	262,817.37	151,391.55

Indian Refining Co. had other deliveries of 3,215.94 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of November and December were as follows:

	Nov., '24	Dec., '24
Nat. Transit	1,022,658.64	958,729.73
S. W. Pa. P. L.	663,131.46	635,754.50
Eureka P. L.	133,437.43	1,860,765.64
Buckeye P. L. (Macksburg)	395,669.54	369,027.80
Buckeye P. L. (Cleveland)	65,129.15	57,701.66
Buckeye P. L. (Lima, etc.)	4,372,559.45	3,726,305.85
Indiana P. L.	601,629.59	613,810.50
Cumberland P. L.	617,906.57	607,353.62
Southern P. L.	476,795.57	550,124.39
Crescent P. L.	58,213.43	58,170.73
N. Y. Transit	711,774.78	620,729.14
Northern P. L.	679,449.45	976,982.74
Pure Oil P. L.	404,853.15	415,288.64
Emery P. L.	9,770.62	7,841.43
Paragon Ref.	102,333.48	36,658.11
Indian Ref.	135,869.56	69,804.95
Paragon Dev.	9,416.32	13,149.94
Pittsburgh P. L.	4,168.88	5,479.15
Riggs	766.27	
Total	12,268,529.76	11,583,679.52
Decrease	395,531.36	684,850.24

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of November and December, showing the gross stocks of the above fields:

	Nov., '24	Dec., '24
Pennsylvania	3,906,769.11	3,932,186.36
Lima	1,330,142.27	1,343,428.02
Kentucky	1,569,619.78	1,408,856.79
Mid-Continent	5,259,367.61	4,851,486.54
Illinois	102,630.99	47,721.81
Total	12,268,529.76	11,583,679.52

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1921	1922	1923	1924
January	64,460	67,702	75,790	62,688
February	70,054	75,096	71,093	68,023
March	68,555	78,531	76,592	68,721
April	65,036	75,462	75,614	71,058
May	65,486	77,592	77,365	63,943
June	62,438	76,193	77,593	63,230
July	59,486	76,435	71,879	64,208
August	58,488	79,387	76,910	59,942
September	60,110	78,512	72,358	62,930
October	57,688	77,209	76,256	64,976
November	58,470	75,313	70,762	56,282
December	61,000	73,351	69,271	56,811

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for past four years:

	1921	1922	1923	1924
January	115,550	119,792	171,067	145,518
February	96,736	111,362	164,219	148,732
March	84,168	127,753	185,487	147,098
April	101,015	127,068	170,751	147,611
May	100,253	127,840	177,102	134,997
June	105,037	137,638	173,598	143,010
July	97,096	137,872	168,330	124,187
August	101,652	163,275	142,766	123,120
September	117,440	158,761	137,286	127,325
October	105,728	155,345	134,597	123,170
November	121,803	165,677	131,426	124,400
December	104,023	172,861	139,909	151,392

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1922	1923	1924
January	16,297,858	14,040,567	12,907,202
February	17,009,293	14,028,437	12,844,203
March	16,877,937	13,873,146	10,906,762
April	16,777,842	13,737,575	10,922,742
May	16,948,962	13,815,622	11,335,209
June	16,810,169	14,541,253	11,544,294
July	16,660,286	14,645,584	12,062,261
August	16,235,229	14,770,539	12,221,676
September	16,228,545	14,803,444	12,366,536
October	15,757,746	14,504,111	12,664,063
November	15,171,972	14,157,726	12,268,530
December	14,323,765	13,444,361	11,583,680

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1923—	Receipts	Shipments	Stocks
December	2,893.07	3,499.27	15,640.37
1924—			
January	2,942.19	8,641.17	9,940.75
February	2,151.78	1,926.55	10,073.98
March	3,398.78	1,716.28	11,756.48
April	3,311.84	2,066.78	13,001.54
May	3,036.50	5,338.21	10,699.83
June	3,188.31	407.01	13,481.13
July	3,067.74	3,334.29	13,214.58
August	2,901.36	6.21	16,109.78
September	2,794.58	5,775.89	13,128.42
October	3,342.40	1,880.50	14,590.32
November	2,700.13	4,862.89	12,427.56
December	3,120.34	2,659.13	12,888.77

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, January 1	2,096,210.13
Runs from wells	613,460.52
Other receipts	341,179.13
Regular deliveries	501,037.16
Other deliveries	445,911.25

The amount of Illinois oil run by the Tidewater Pipe Line Co. in December was 27,458.71 bbls., and deliveries were 34,906.13 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries from the Illinois Field as follows:

1923—	Runs	Deliveries
December	534,185.94	282,542.41
1924—		
January	493,337.25	288,731.09
February	535,490.70	353,613.16
March	611,289.36	369,542.51
April	514,366.43	339,546.10
May	751,080.44	510,414.42
June	725,060.87	528,403.31
July	759,646.84	552,386.16
August	720,457.72	519,335.70
September	714,575.36	535,763.16
October	741,767.42	543,863.77
November	650,147.63	521,459.21
December	540,919.23	595,943.13

The Tidewater Pipe Co., Ltd., also delivered in December 341,544.22 bbls. of Oklahoma oil. The total deliveries of all grades by the Tidewater were 520,303.64 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Av. bbls. per wk.—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All Ports
July	37,710	16,129	473,516	84,452	42,452	654,249	.....	16,936	.....	.....	.....	671,185
August	114,032	33,419	664,387	71,806	33,871	907,515	907,515	.....	6,774	.....	.....	914,289
September	67,670	34,531	638,617	76,300	18,900	836,018	.....	.....	.....	.....	.....	836,018
October	85,379	49,000	527,948	85,602	36,127	784,056	.....	.....	.....	.....	.....	784,056

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Av. bbls. per wk.—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All Ports
May	156,485	134,602	288,903	59,613	300,097	939,699	315,679	295,358	199,591	38,164	848,792	1,788,491
June	120,169	108,731	434,931	68,131	239,400	971,362	412,741	251,762	169,831	33,831	868,166	1,839,527
July	62,097	81,291	445,067	38,418	277,970	904,843	226,194	273,455	130,739	24,978	759,361	1,664,204
August	80,839	57,356	247,710	96,903	207,065	691,873	370,549	238,457	115,839	14,877	739,742	1,431,614
September	101,969	45,028	193,200	77,000	204,869	622,066	256,329	315,000	141,170	20,300	731,799	1,353,865
October	136,826	67,515	257,418	90,818	113,127	665,704	231,903	268,616	111,097	29,351	640,967	1,306,671

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS (Revised)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountain	Eastern Fields	Total
January:	Month	20,912,500	12,292,833	10,522,143	2,223,878	2,686,680	1,601,575	4,447,039	2,942,050	58,628,698
	Daily average	674,597	396,543	339,424	71,738	118,925	51,664	143,453	94,905	1,891,249
February:	Month	19,341,226	12,236,437	10,238,052	2,112,853	3,302,750	1,504,460	3,996,251	2,984,000	55,716,029
	Daily average	666,939	421,953	353,036	72,857	113,887	51,877	137,791	102,896	1,921,343
March:	Month	19,913,262	13,336,851	12,044,503	2,206,426	3,882,695	1,701,593	3,827,204	3,250,600	61,163,134
	Daily average	642,363	430,221	388,532	71,175	125,247	54,890	123,460	104,858	1,973,064
April:	Month	19,299,849	13,452,240	11,577,246	2,268,540	4,068,225	1,495,582	3,738,332	3,273,600	58,172,614
	Daily average	643,328	448,408	385,908	75,618	136,608	49,853	124,611	109,120	1,939,157
May:	Month	19,833,576	14,247,697	11,623,395	2,459,765	4,659,117	1,596,701	3,866,010	3,264,000	61,550,261
	Daily average	639,793	459,603	374,948	79,347	150,288	51,507	124,710	105,043	1,985,697
June:	Month	18,807,999	14,447,390	11,602,350	2,469,380	4,756,443	1,812,580	3,638,634	3,253,600	60,788,376
	Daily average	626,933	481,580	386,745	82,313	158,548	60,429	121,288	108,453	2,026,279
July:	Month	19,274,755	15,191,860	11,917,137	2,671,053	4,597,969	1,815,966	3,768,398	3,371,600	62,608,738
	Daily average	621,766	490,060	384,424	86,195	148,322	58,580	121,561	108,761	2,019,637
August:	Month	19,112,998	16,525,356	11,808,876	2,717,398	4,359,241	1,702,525	3,749,375	3,286,000	63,261,769
	Daily average	616,548	533,076	380,931	87,658	140,621	54,920	120,948	106,000	2,040,702
September:	Month	18,308,233	16,299,030	11,089,492	2,638,900	4,029,535	1,795,575	3,330,007	3,150,000	60,640,772
	Daily average	610,274	543,301	369,650	87,963	134,318	59,853	111,000	101,936	2,021,355
October:	Month	18,696,559	16,189,898	10,942,005	2,768,455	3,983,696	1,774,707	3,058,268	3,395,000	60,808,588
	Daily average	603,115	522,255	353,000	89,305	128,506	57,249	98,654	109,516	1,961,567
November:	Month	17,767,034	15,955,620	10,731,264	2,597,460	3,461,050	1,965,921	2,788,110	2,941,000	58,207,483
	Daily average	592,234	531,854	357,709	86,582	115,035	65,531	92,937	98,033	1,940,249
December:	Month	18,795,126	16,031,185	11,264,915	2,537,443	3,380,511	1,870,876	2,302,888	3,000,850	59,183,794
	Daily average	606,294	517,135	363,384	81,853	109,049	60,351	74,287	96,492	1,909,156
	Total, 1924	230,063,117	176,206,397	135,361,378	29,671,551	48,167,912	20,638,051	42,510,516	38,112,300	720,731,222
	Daily average	628,588	481,438	369,840	81,070	131,606	56,388	116,149	104,133	1,968,211

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